THE New PLANET no PLANET:

OR,

The EARTH no wandring STAR;

Except in the wandring heads of GALILEANS.

U*6.30

HERE

Out of the Principles of Divinity, Philosophy, Astronomy, Reason, and Sense, the Earth's immobility is asserted; the true sense of Scripture in this point, cleared; the Fathers and Philosophers vindicated; divers Theologicall and Philosophicall points handled,

AND

COPERNICUS his Opinion, as erroneous, ridiculous, and impious, fully refuted.

By ALEXANDER ROSSE.

In answer to a Discourse, that the Earth may be a PLANET.

LACTANT. de falsâ Sapientiâ lib. 3. cap. 24.

Quid dicam de iis nescio, qui cum semel aberraverint, constanter in stultitia perseverant, & vanis vana defendunt, nisi quòd eos interdum puto, aut joci causâ philosophari, aut prudentes & scios mendacia defendenda suscipere, quasi ut ingenia sua in malis rebus exerceant vel ostentent.

LONDON.
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03,102

To the Right honourable GEORGE Lord BERKLEY, Baron of *Berkley*, &c.

My Lord,

THey who have been long at ſea, when they come on ſhore, think that the Earth moveth as the Sea did, till their brains be ſettled; even ſo theſe men who have been lately travelling in the new found world of the Moon, which ſwiftly moveth about the Earth, think when they come down hither, that it is the Earth which moveth: This falſe imagination I have endeavoured to remove in this Book, which now comes abroad under your Lordſhips Name; the reaſon of my dedication is, becauſe I underſtand by your Lordſhip, that the Gentleman, who came down a while agoe from the Moon, with newes of a late diſcovery there, is of this opinion; and one who hath relation to your Lordſhip, which indeed I knew not till now, that the Book is almoſt printed: my other reaſon is, for that I am bound in a dutifull recognition of your Lordſhips reſpects to ſcholars in generall, and to me in particular; which ſheweth that not only are you noble by extraction, but by your affection alſo and diſpoſition to learning, which is now ſo much ſlighted, yea vilified, by ſuch as are either ignorant, or wicked; the one ſlight learning, becauſe they know it not,——*ignoti nulla cupido*; and like the Fox in the Fable, diſparage the grapes, becauſe he could not reach them; the other raile againſt learning, as the mad Africans do againſt the Sun; and how can Owles and Bats love the light, which manifeſt their deformity? Can theeves and cut-throats, whilſt they are penetrating the works of darkneſſe, abide the light of a torch? The infernall ghoſts tremble to ſee any light,

——*trepidant immiſſo lumine manes:*

But your Lordſhip, being *de meliore luto*,—— knowes the worth of learning, and therefore loves it; which that you may long know, love, and live, ſhall be the wiſh of

Your Honours moſt humble ſervant to command,

ALEXANDER ROSS.

To the Reader.

Good Reader, there is a nameleſſe man come down from the Moone, who brings us ſtrange newes of a late diſcoverie; to wit, of a world found there; This man of the Moone goeth about to perſwade us, in a booke which he hath ſet out, come lately to my hands; that the world, ever ſince Adam, *hath been in a dreame, in thinking that the heavens move, and the earth reſts: He tells us another tale, to wit, that it is the earth that moveth, and the heavens ſtand ſtill: He lieth in ambuſh, and from his darke lurking place, ſhoots abroad his arrowes; ſo that we can no more ſee him, then if he were in the Moone ſtill; but it is a cowardly part to hide himſelfe; and from the cloud, in which he is wrapt, to let fly his darts againſt me, and that Book which a few yeares agoe I wrote in Latine, in confutation of this new phantaſticall Chimæra. My caſe is like that of* Volſcus *in the Poet, who knew not whence thoſe darts came that killed* Sulmo *and* Tagus,

Sævit atrox Volſcus, nec teli conſpicit uſquam
Authorem, nec quo ſe ardens immittere poſſit.

I might be thought, luctari cum larvis, *to fight againſt ſhadowes, as* Æneas *did going down to hell.*

If I ſhould make any reply to a nameleſſe diſputer, but I am adviſed however to anſwer him, leaſt he ſhould ſing (iò triumphe;) *and not to ſuffer by ſilence my reputation to be wounded, the truth prejudiced, and the Scriptures abuſed, with his idle gloſſes. Therefore here I preſent to thee the weakneſſe and vanities of this mans conceits, as far as the ſhortneſſe of time, and my other ſtudies and affaires would permit me; which I pray thee accept in good part, and ſo farewell.*

AL. R.

The Preface.

THe title of this new book is a may be (that the Earth may be a Planet) but I ſay that may not be: For a Planet is a wandring ſtarre, and the Earth is not a ſtarre in its eſſence, nor a wanderer in its motion. And indeed you wrong our common mother, who ſo many thouſand yeares hath been ſo quiet and ſtable, that now ſhe ſhould become a wanderer in her old age; but if ſhe may be a Planet, tell us whether ſhe may be one of the ſeven Planets, who are called *Errones* in Latine, (not for that they have an erroneous, but becauſe they have a various motion) or whether ſhe may be an eighth Planet, that ſo wee may make up our week of eight dayes; for why ſhould not mother Earth have one day of the week, aſwell as the other Planets, to carry her name? And ſo let there be *dies terræ*, aſwell as *dies Solis*, *& Lunæ*, Earth day, aſwell as Sunday, or Moonday; and whereas the Planets are moved according to the motion of the ſpheares, you had done us a pleaſure, if you had told us the ſpheare in which the Earth moveth: Againe, if the Earth be a Planet, and each Planet hath its period of time for finiſhing its courſe: *Saturne* 30. yeares, *Jupiter* 12. *Mars* 2, *&c.* What is the time which you will allot to the Earth for the accompliſhing of her annuall motion? If it be true, that the lower the Planet is, the ſwifter it is in its annuall motion; as the Moon in 27. dayes, and 8. houres, doth finiſh her courſe, which *Saturne* ends not but in 30. yeares ſpace; doubtleſſe, this Earth-planet, being the loweſt of all, muſt in a very ſhort time expire its annuall race. Moreover, if the Earth be the light Planet, *Sol*, who is the King of this planeticall Common-wealth, cannot have his throne in the midle, as Antiquity, and Truth too have placed him; for hee ſhall have three on his one hand, and four on the other, and ſo cannot impart his light equally to all. And whereas every one of the Planets hath his office in this Reipublick; to wit, *Saturne* the Counceller, *Jupiter* the Judge, *Mars* the Captaine, *Venus* the Steward, *Mercury* the Scribe or Chancellour, and the *Moone* the Meſſenger: Wee muſt needs finde out ſome office for the Earth, otherwiſe ſhe will be counted idle, and none of the Planets. But that the Earth may be a Planet, is as true as that the Sun may be a burning ſtone, that there may be a man in the Moon, that there may be an infinite number of Suns and worlds, that the Stars and Planets may have had their firſt originall and being from the Earth, which have been the extravagant conceits of giddy headed Philoſophers: But I remember what *Ariſtotle* ſaith of ſome may-bees or poſſibilities; Δυνάτον τί ὃν εἶναι ἢ γενέσθαι, μὴ εἶναι δ', μηδὲ γενέσθαι that which may be, may not be, and never ſhall be, and ſo the Earth may be a Planet; that is, it neither is, nor ever ſhall be a Planet. But now let us leave your title, and examine the ſubſtance of your following Diſcourſe. *l. 9. Meta. 4*

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The new PLANET no PLANET.

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CHAPT. I.

I Had ſhewed how unreaſonable it was, that an upſtart novelty concerning the Earth's motion, ſhould thruſt out a truth of ſo long continuance and univerſality, as this of the Earth's immobility. You anſwer, *That wee muſt not ſo doat upon antiquity, as to count that Canonicall, which is approved by the conſent of the Ancients.* To this I anſwer: 1. Make it appeare that your opinion of the Earth's motion is true, and ours falſe; and we will prefer yours, though new. 2. If you can make it appeare that your opinion is any waies uſefull or advantageous, wee will admit it. 3. Suppoſe that both your and our opinion were but conjecturall, and that there were but an equall probability in both; yet you muſt not prefer, nor equall your opinion to ours, becauſe we have antiquity and conſent of all times, of all nations, of ſo many holy, wiſe, and learned men for us, which you want; in this reſpect then, if both our opinions were put in the balance, yours will be found too light, though you ſhould adde to the ſcale that heavie Pruſſian *Copernicus*. 4. Though there were no hurt in your opinion, yet wee may not entertaine it; for the world is peſtered with too many opinions already; and a great many might be well ſpared. 5. But whereas your opinion is falſe, abſurd, and dangerous, as we have partly ſhewed, and will ſhew afterwards,

Cont. Lanſbergium, l. 1. ſect. 1. c. 20.

wee were mad to receive it; having neither truth, reaſon, ſenſe, conſent, antiquity, or univerſality to countenance it. 6. That which you call the preſerving of Philoſophicall libertie, is indeed the looſing of the reines to exorbitant wits, to run headlong into every kinde of abſurdity. 7. Wee doe not inſlave our ſelves to the opinion of any one man, (as you ſuppoſe we doe) but we are of the opinion of all men, of all times, and nations. You inſlave your ſelfe to one man, and is guilty of that which you accuſe in us: *Quis tulerit Gracchos?* 8. Wee condemne not your opinion becauſe it is new, but becauſe not true. A new falſhood, a falſe novelty; and ſuch a new deformed brat is to be choaked in the infancy: *Principiis obſta*; kill the Cockatrice in the egge. 9. You ſay it's but a novelty in Philoſophy, but I ſay it intrencheth upon Divinity: for Divinity tells us, that the ſtanding of the ſun, and moving of the earth are the miraculous workes of Gods ſupernaturall power: your new Philoſophy tells us, that they are the ordinary workes of Nature; and ſo this ſcope being granted, you may turn Divinity into naturall Philoſophy, and confound the works of God, and of Nature. 10. You tell us, *That Antiquity conſiſts in the old age of the world, not in the youth of it.* What Antiquity? Of the world? then you ſpeak not properly, as you ſay you doe, but tautologically; the worlds old age conſiſts in its old age. If you mean that your opinion is not new, but old, becauſe the world is old, you ſpeak abſurdly: for old opinions are ſo called, not becauſe they were found out in the youth, or in the old age of the world, but becauſe they have continued a long time in the world; and ſo new opinions are new, though found out in the old age of the world. Opinions have no relation to the ages of the world, but to their owne continuance: Are you older then your great Grand-father, becauſe the world is older now, then it was when hee lived? 11. *You are the fathers (you ſay) in ſuch learning as may be increaſed by experiments and diſcoveries, and of more authority then former ages.* Why doe you not tell us plainly, that you are fathers of learning, as well as in learning? but indeed you are not the fathers of learning, you are onely fathers of your new diſcoveries and freſh experiments; that is, of new, fond, and ſavourleſſe phanſies: and why you muſt be of more authority then former ages, I ſee no reaſon. Shall not *Juball*, and *Tubal-Cain*, the inventors and fathers of their Arts, be of as great authority, as you that are the fathers of ſuch miſhapen monſters, though they lived in the infancy,

cy, and you in the old age of the world? Why ſhould I rather credit you in telling us of a world in the Moon, and of the Earth, that it is a planet, then thoſe wiſe men of former ages, who never dreamt of ſuch idle and ridiculous conceits? You ſay, *Truth is the daughter of time*; ſo ſay I, but errors, hereſies, falſhoods, are times daughters too. We ſee how fruitfull this later age of the world is of new and frivolous opinions. But how much are you beholding to old mother Time, who hath beſtowed her eldeſt daughter, Truth, upon you, having paſt by ſo many worthy Suitors in all ages? this is a tranſcendent favour, you are *homo perpaucorum hominum*, and have been wrapped in your mothers ſmock. 12. *In leaving us to our liberty, to accept or reject your opinion*; I perceive you have no great confidence in your new married wife, Times daughter: you miſtruſt your cauſe, and the validity of your arguments; and that you have imployed your pen more to ſhew your wit, then to evince our underſtanding.

2. *You will not have this Philoſophicall doubt decided by common people, for they judge by their ſenſes, nor yet by the holy Fathers, for they were ignorant* (you ſay) *in this part of learning. Ariſtotle* you have already diſabled, for his works are not neceſſarily true; and, I ſay, it is not fit that you ſhould be Judges in your owne cauſe. Whom then will you name for Judges, ſeeing Scriptures, Fathers, ſenſes, Peripateticks, are rejected; reaſons and arguments you have none: I think you muſt be faine to call for ſome of your people out of the Moon. *Juno Lucina, fer opem.* But in calling of the Fathers ignorants in this part of learning, you doe them wrong; for they were neither ignorant of Philoſophy, nor of Aſtronomy; they condemned the idle opinions of both; amongſt the reſt, that of the *Antipodes*. For although I deny not the *Antipodes*, yet the * Philoſophers opinions concerning them were vaine: as, That they inhabited that Region to which the ſun riſeth, when it ſets with us. 2. In that they could not tell how theſe people came thither, ſeeing the vaſt ocean, beyond the ſtraight of *Gibraltar*, was not navigable; and they confeſſed that it could not be paſſed. 3. The reaſons which they alledged to prove *Antipodes* were not demonſtrative, nor experimentall, but meerly conjecturall; ſo that the Fathers could receive no ſatisfaction from their reaſons. 4. They held that thoſe *Antipodes* were another race of men, then theſe of this hemiſphere, and that they had been there perpetually; and that they neither could, nor ever ſhould know what kind of men they were. 5. They did

* *Plin. li. 2. cap. 65. Auguſt. de civit. li. 16. cap. 9. Macrob. in ſom. Scipionis. li. 2. c. 5. Lactanti. de falſâ Sapien. li. 3. cap. 24.*

waver in their opinion, ſometimes ſaying that the weſterne people were *Antipodes* to us; ſometimes the Southerne people; ſometime confounding *Antipodes* and *Antichthones*. 6. They would neceſſarily inferre from the roundneſſe of the earth, that the lower hemiſphere was dry earth, and inhabitated with people: the conſequence of which S. *Auſtine* denies. 7. They held that the oppoſite earth to ours had an oppoſite motion. Of theſe, and other vaine opinions concerning *Antipodes*, you may ſee in *Pliny*, *Auſtine*, *Macrobius*, *Lactantius*, *&c.* It was not then out of ignorance, or peeviſhneſſe, but upon good grounds and reaſons, that they denyed *Antipodes*, as the Philoſophers eſteemed of them. Otherwiſe S. *Auſtin* knew and acknowledged there might be *Antipodes*. 2. What though the Fathers or *Ariſtotle* had been ignorant in this point, muſt therefore their authority in other points be ſlighted? muſt their failing in one or two points of Philoſophy, leſſen their credit in all Philoſophicall truths? What if they had been ignorant in ſome one point of Divinity, muſt we therefore reject their authority in other points? The Apoſtles were ignorant of the day of Judgement, and of ſome other points; yet wee beleeve them never a whit the leſſe in all other points. 3. There is odds between denying of *Antipodes*, and denying the motion of the Earth, and ſtanding of the Sun: For the reaſons which Philoſophers brought to prove *Antipodes*, were neither experimentall, nor demonſtrative, nor any waies ſatisfactory; but for the ſtability of the earth, and motion of heaven, wee have both ſenſe, reaſon, authority, divine and humane, conſent, antiquity, and univerſality, as is ſaid; and what can be wanting to confirme a truth, which wee have not to confirme this? 4. You ſay, *That* Solomon *was ſtrangely gifted with all kinde of knowledge*: then would I faine know why hee did not plainly tell us, (being ſo great a Philoſopher) that the Earth moved, and that the Sun ſtood ſtill; but quite contrary proves the tranſient vanity of humane affaires, from the earth's ſtability, and conſtant motion of the ſun.

l. Categ. c. 10.

3. *Job*, (you ſay) *for all his humane learning, could not anſwer theſe naturall queſtions which God propoſeth to him: as, Why the ſea ſhould be ſo bounded from overflowing the land. What is the breadth of the earth? What is the reaſon of ſnow or haile, raine or dew, yce or froſt? which any ordinary Philoſopher in theſe daies might have reſolved. Anſw.* You would make *Job*, who was both a King and a Prieſt, a very ſimple man, if wee would beleeve you. But how know you that *Job* could

not

not anſwer God? Mary, becauſe hee ſayes of himſelfe, *That hee uttered that, he underſtood not: things too wonderfull for him which hee knew not.* But, Good Sir, theſe words are ſpoken of the ſecret waies of Gods providence, and of his hid and unſearchable judgements, which are theſe wonderfull things that *Job* knew not nor underſtood; for his judgements are a bottomleſſe depth, his waies are paſt finding out; and they are not ſpoken of naturall cauſes of meteors. I pray, were there not haile and ſnow, raine and dew, yce and froſt, in thoſe daies, and did not hee know that theſe meteors were generated of vapours, as well as you? or what ſhould be the cauſe of his ſtupidity, and of your quickneſſe of apprehenſion? Alas! how doe wee pleaſe our ſelves in the conceits of our ſuppoſed knowledge, whereas indeed wee have but a glimmering inſight in Natures works, a bare ſuperficiall and conjecturall knowledge of naturall cauſes? Doubtleſſe *Job* was not ignorant but modeſt, in acknowledging the inſufficiency of Philoſophicall reaſons, and therefore thought it better to be ſilent, then to ſhew his folly in ſuperficiall and vaine anſwers: For both Aſtronomy, and naturall Philoſophy, are arts of Diviners, rather then Diſputers; and Philoſophy is but opinion, ſaith *Lactantius*; and even in thoſe things which Philoſophers bragge that they found out, they are *opinantes, potiùs quàm ſcientes*; carried with opinion, rather then knowledge, ſaith S. *Auſtine*; which I have found by long experience. *Job* knew that though humane and Philoſophicall reaſons would ſeem plauſible enough to man, yet that God, to whom only truth is known, would check him, and account his wiſedome but folly, to ſpeak with *Lactantius*. If hee had anſwered God that the ſea is bounded from overflowing the land, becauſe the drieneſſe of the earth reſiſteth the moiſture of the ſea, which is the reaſon of Philoſophers; God would have ſhewed him the folly of his reaſon, by the daily flowing of the ſea, on the dry lands; and by the many inundations of the ſea over whole countries. I doubt not but if God had asked you the cauſes of clouds and raine, you would have anſwered him, that they were generated of moiſt vapours elevated into the aire, and there diſſolved or ſquized by heat or cold; but then why be there no clouds nor raine in Egypt, ſeeing the Sun elevates vapours out of *Nilus*? So you will tell me that hail or ſnow are generated of moiſt vapours, condenſate by cold into that form: but then why in the hotteſt countries, even under the line, are the greateſt ſhowres and biggeſt haile? So might I reaſon with you of

Job 42 3.

Lactan. de falſa Sapi. lib. 3. cap. 3.

Aug. ad Lau. li. 1. cap. 10.

Lact. li. 3. ca. 3. de ſal. Sap.

the other Meteors; but that I will haſten to be rid of this taske, having other imployments.

Cont. Carpentar. Sect 2. c. 10. 4. I had ſaid that there was no credit to be given to *Pythagoras*, whom you make a patron of your opinion; becauſe he was both a ſorcerer, as Saint *Auſtin* ſheweth, and the father of many monſtrous abſurdities, as I have ſhewed out of *Theodoret*. You would ſalve his credit by telling us, that all men are ſubject to errours; and I deny it not: but it is one thing for a man to fall into an errour accidentally, and an other thing to broach a multitude of errours. A man may ſpeake a lie by chance, and that ſhall not derogate from his credit; but if he uſe to lie, I will ſcarce beleeve him when hee ſpeakes truth. That *Pythagoras* was a witch, his name ſheweth from πύθιος and ἀγορεύω; either becauſe hee ſpoke as *Apollo Pythius* did, falſly and obſcurely; or becauſe he was poſſeſſed with the Pythian Spirit, or the Devill who deluded the Gentiles; who appearing and deceiving them in the forme of the Serpent *Python*, which hee was ſaid to kill, was called *Pythius*. His cauſing of an Eagle to flie to him by certaine conjuring words, and being at the ſame time in two ſeverall places, at *Thurii* and *Metapontii*, with many other ſuch like conjuring tricks, ſhew what he was. *Pliny* ſaith, that he went to *Egypt*, and many other places to learne Magicke: the Pythagoreans would kill no Serpents, ſo highly they honoured them. Saint *Auſtin* ſaith out of *Varro*, that *Pythagoras* was much addicted to Hydromancie and Necromancie, and to conſult the infernall Spirits by bloud. And *Tertullian* deciphers him to be a notable impoſtor, who to make people beleeve his doctrine of tranſanimation, hid himſelfe ſeaven yeares under ground; macerating his body with hunger, thirſt, naſtineſſe: hazarding his health and life with damps and filth, to confirme a groſſe lie. *Quomodo credam non mentiri Pythagoram, qui mentitur ut credam?* He that will with ſwearing, lying, and deceiving trickes, perſwade us that he was in Hell, and that he had been *Aethalides*, *Euphorbus*, *Pyrrhus*, and *Hermotimus*, would make ſmall bones to broach ſuch monſtrous opinions, as of the motion of the Earth, and immobilitie of the heavens, out of ambition to get him a name. And this is the goodly Patron of your opinion. *Dignum patella operculum. The man of eminent note and learning as you call him; highly eſteemed for his divine wit and rare inventions.* Againe when you ſay, *that many of his abſurd ſayings are to be underſtood in a myſticall ſenſe*: why will you in a literall ſenſe underſtand his ſayings of the Earths motion, and Heavens immobilitie?

Aug. l. 7. de Civit. c. 35.
Theod. ſer. ad Grac. infid.
Plin. l. 30. c. 1.
De civit. Dei, l. 7. c. 35.
Tertul. l. de Anim. c. 28, 29.
Vide Laertum, l. 8. de vit. Phil.

5. I

5. I had ſaid that indeed *Pythagoras* was not the Author of this opinion, for no ancient writer aſcribes it to him; you reply, *that many ancient Authors aſcribe it to the Pythagorean Sect.* For proofe whereof, in ſtead of many authors, you bring one, as if one were a multitude; and that one is *Ariſtotle. Anſw.* There is a difference betweene *Pythagoras*, and Pythagoreans; betweene the Scholar and the Maſter: I ſpake of *Pythagoras*; *Ariſtotle*, of the Pythagoreans. The Scholars oftentimes broach opinions which the Maſters never knew; it is ordinary in all Heretickes and Sectaries to father opinions on the firſt founders, and on other learned men, which they never knew nor dreamed of. That impure ſect of the Nicolaitans, fathered their opinions on *Nicolas* the Deacon. The Arians would have made the world beleeve that *Origen*, *Dionyſius* of *Alexandria* and *Lucian* the Martyr, had been the authors of their impieties. The Donatiſts alledge Saint *Cyprian* for the author of their ſeparation from the Catholick Church: and the mad-headed Circumcellions called themſelves Donatiſts. Therefore, when you ſay that it appeares by *Ariſtotles* teſtimony, that *Pythagoras* thought the Earth to be one of the Planets, you are deceived; for he ſpeakes not of *Pythagoras*, but of the Pythagoreans, of which number you are one; not onely for affirming the Earth to be a Planet, but alſo in holding tranſanimation; for you make no difference betweene *Pythagoras* and his diſciples: thinking (as it ſeemes) that the ſoule of *Pythagoras* which had beene in ſo many bodies before, was now entred into the bodies of the Pythagoreans. 2. I ſaid that *Pythagoras* held, that the heavens by their motions made a muſicall harmonie, which could not conſiſt with the earths motion; you ſay it may conſiſt, but you doe not prove how it may; tell me, for what end doth the Heaven move? Is it not for the benefit of the Earth? But if the earth move to receive its benefit from the Heaven, ſurely the Heaven moveth to no end or purpoſe. Againe, you would faine eſcape by telling us, *That* Pythagoras *meant by the muſicall concent, i. the proportion and harmony that is in the bigneſſe and diſtance of the Orbes.* You tell us ſo, but how ſhall we beleeve you? This ſaying of his is not reckoned amongſt his ſymbolicall ſpeeches; and if it be ſymbolicall, why not that ſaying of the Earths motion? Is not that alſo myſticall?

6. *You ſet down ſeaven or eight men of ſpeciall note (as you ſay) for their extraordinary learning, and for this opinion.* *Anſw.* If this opinion makes men to be of ſpeciall note, then you muſt needs be a noted man;

man, or ſhall be hereafter, when you are come downe from the Moone, or freed from the cloud that inwraps you, for you are of this opinion: but you might have ſpared your labour, for theſe men were Pythagoreans; and I told you before, that Pythagoreans were of this opinion; but few of theſe were noted men for their extraordinary learning: they were obſcure men, and very little ſpoken of in old Hiſtories. *Ariſtarchus* the Tyrant, *Ariſtarchus* the Poet, and that rigid *Ariſtarchus* the Grammarian, and cenſurer of *Homer*, were noted men; but not your *Ariſtarchus* the Mathematician. So *Philolaus*, *Nicetas Syracuſanus*, *Ecphantus* and *Lyſippus* have little ſaid of them: as for *Heraclides Ponticus*, he was a man noted more for his ambition, then for his learning; in that he affected to be a god, cauſing his friends to convey his dying body out of the way, and a dragon to be laid in his bed: that the world might thinke he was now a dragon; and that he ſhould be worſhipped in that forme: and indeed he ſhewed himſelfe to be that, which he deſired to be; to wit, a beaſt, and not a man. Σὺ δὲ θὴρ, οὐ σοφὸς ὤν, as *Diogenes Laertius* ſpeakes of him. As for *Plato* it is not certaine if he were of your opinion, and if he had been, the matter is not great. And as for *Numa Pompilius*, he was not *Pythagoras* his ſcholar, for he lived about a hundred years before *Pythagoras*; who lived about the time that *Brutus* was Conſul, who drove out the Kings, as *Solinus* witneſſeth, and *Tullie*. *Livie* ſaith, that he flouriſhed in the time of *Servius Tullus*. Neither doth *Plutarch* affirme that *Numa* was ſcholar to *Pythagoras*, but becauſe their inſtitutions were much alike, it was ſuppoſed by ſome (ſaith he) that *Numa* had familiarity with *Pythagoras*. It is true that *Numa* built a round Temple, not in reference to this opinion of the Earths motion, as you dreame; for he was not of this opinion; but in reference to the roundneſſe of the world, as *Plutarch* ſaith: And he placed the Veſtall fire in the middle, not to repreſent the Sunne in the center of the world, (that is your gloſſe,) but to repreſent the ſite of the elementary fire, which he conceived to be in the midſt of the world.

O. 5.

Solin c. 16. Cic. 4. Tuſcul. Livius Dec. 1. l. 1. Plutarch. in Numa.

7. *Sure, Brag is a good dog with you; for you tell us that there is ſcarce any of note or skill, who are not* Copernicus *his followers; and more there are of his opinion, then all the reſt put together; and yet you tell us but of one Cardinall* Cuſanus, *and ſixe more, to avoide tediouſneſſe.* But in this you ſpeake by the figure Antiphraſis, by contraries: You name but one Cardinall on your ſide, and within three leaves after, you tell us of two Seſſions of Cardinalls on our ſide who con-

condemned this opinion: are not twelve more then one? and ſhall not the judgement of ſo many be preferred to one? How many more can you picke out of the whole Colledge of Cardinals, that were of your opinion, beſide *Cuſanus*, who was knowne to be a man that affected ſingularitie? But I think you looked through a multiplying glaſſe, when you concluded from the induction of five *Copernicits*, that there were more of his opinion, then all the reſt put together. Are you not like him who thought that all the ſhips and goods that came into the *Pyreum* were his owne? And yet of theſe five which you muſter up for your defence, there was one, even the chiefeſt, and of longeſt experience, to wit, *Galileus*, who fell off from you; being both aſhamed, and ſorry that he had been ſo long bewitched with ſo ridiculous an opinion; which was proved to him both by Cardinall *Bellarmine*, and by other grave and learned men; that it was contrary both to Scripture, Divinitie, and Philoſophie: therefore *Galilie* on his knees did abjure, execrate, and deteſt, both by word and writ, his errour which you maintaine; and promiſed with his hand on the holy Evangil, never to maintaine it againe: the other five, are men of no great note, except in your Bookes. *Mercure Francois An. 1633.*

8. *You adviſe us out of* Ariſtotle *and* Ptolemy, *to ſpeake that which is moſt likely; to entertaine that which is moſt agreeable to reaſon; to frame ſuch ſuppoſitions of Heaven as be moſt ſimple: and you tell us that* Rheticus *and* Keplar *wiſh that* Ariſtotle *were alive againe.* But your advice is ſuperfluous, and their wiſh is ridiculous: for we ſpeake and intertain that which is moſt reaſonable; if we do not, prove it, that we may amend our errour. Our ſuppoſitions of Heaven are not ſo ſimple as could be wiſhed; but we were better content our ſelves with them, then move the earth with you: for that is, *ex fumo in flammam*, to leap out of the frying-pan into the fire. Now to wiſh *Ariſtotle* alive, or to thinke that he or *Clavius* would ever be of your opinion, are meere dreames and phanſies. And though *Clavius* had found that *Ptolomies Hypotheſes* had not beene ſo exact as ſhould be; yet he would not have beene ſo mad, as to beleeve the Earths motion, and the Suns reſt. And though ſome have fallen off from *Ariſtotles* and *Ptolomies* opinion, to *Copernicus*, that will but little help your cauſe: for in all profeſſions there have ever been ſome unconſtant and giddy-headed men; many have fallen off from Chriſtianity to Mahumetiſme; from Calviniſme to Anabaptiſme; will you condemne therefore their former profeſſions?

ſo ſome have revolted from *Copernicus* to *Ptolomie*. You challenge then too great a priviledge, when you ſay that none who having bin once ſetled with any ſtrong aſſent on your ſide, that have afterwards revolted from it: beſides that it is falſe, there was never any profeſſion that could brag of ſuch a priviledge: not Chriſtianity the beſt of all profeſſions. And though ſome men reject that opinion in which they were nurſed, and have approved for truth, and now embrace your abſurd Paradox, which is condemned in the Schooles; yet it will not follow that yours is the righter ſide: for will you ſay that becauſe many Chriſtians become Turks and Jews; many Orthodox men have become Arians, Neſtorians, Eutychians, Macedonians; that therefore theſe Heretickes were in the right? There are too many wavering Spirits ſhaken like reeds, and carried about like clouds with every winde of doctrine, unſetled and inſtable in all their wayes.

You tell us, that moſt of thoſe oppoſers of your opinion, have been ſtirred thereunto, either by a partiall conceit of their owne inventions, for every one is affected to his owne brood: or by a ſervile feare, in derogating from the ancients authoritie; or oppoſing of Scripture Phraſes; or by judging of things by ſenſe rather then by reaſon. Anſw. The firſt of theſe reaſons will be retorted upon your ſelfe; for the partiall conceit of your owne inventions, and the affection you carry to your own brood, have made you fall off from that ancient and univerſall truth, to embrace an errour: and this was it that moved *Copernicus* to oppoſe *Ptolomie*, *Alphonſus*, and the other famous Aſtronomers. Therefore, *Tycho* did not oppoſe *Copernicus* to make way for his owne Hypotheſis as you ſay, but to maintaine that truth which had ſo long continued in the world. As for your ſecond reaſon, I anſwer, that we ſhould not without extraordinary and urgent cauſe, derogate from the authority of the ancients; much leſſe, from the meaning of Scripture phraſe; which the Church of God from the beginning hitherto hath delivered to us: neither doe we adhere to the meaning of Scripture phraſe, out of a ſuperſtitious feare of the ſuppoſed infallible Church, as you ſay; but out of a filiall feare to the true Church, our Mother, the ground and pillar of truth: If wee heare not the voice of this Mother, we cannot have God for our Father. A wiſe ſon honoureth his father, but he is a foole that will deſpiſe his mother. Why ſhould we thinke that you or *Copernicus* can better underſtand the Scripture phraſe, then the Church of God from time to time hath done? this was the proud conceit

of

of *Neſtorius*, that he onely underſtood the Scripture phraſe, as *Vincentius* complaines of him. That which you call the new Creed of *Pius* the Fourth, that no man ſhould aſſent unto any interpretatione of Scripture, which is not approved by the ancient Fathers; is indeed the old Creed of the Church, as *Vincentius* ſheweth: let us no wayes no wayes (ſaith he) depart from that ſenſe which our holy Fathers and predeceſſours have maintained. And againe, whatſoever (ſaith he) the Catholique Church hath of old retained, that onely ſhall a true Catholique maintaine and beleeve: therefore he ſhewes that it is the trick of Heretickes to delight in novelties; and to reject and deſpiſe old doctrines. *Ut profanis novitatibus gaudeant, antiquitatis ſeva faſtidiant.* If then the Jeſuites, in reverence to the Churches authority, and to the ancient Fathers doe oppoſe this opinion they deſerve commendation: and ſo did theſe Cardinals that called it in, and puniſhed the defenders of it. Thirdly, you ſay that we judge of things by ſenſe, rather then by reaſon; but indeed you have no reaſon to ſay ſo: for although that ſenſitive things, ſuch as the Earths ſtability, and Sunnes motion, are to be judged by ſenſe; yet we have many reaſons for us, whereby we judge it muſt be ſo as I have ſhewed heretofore. But I confeſſe we judge not by your reaſons, becauſe they are but ſhadowes of reaſon, and no way ſatisfactory: neither doe we ſo tie the meaning of Scripture to the letter of it (as you ſay,) but that we give freedome to raiſe other ſenſes, whether allegoricall, tropologicall, or anagogicall; ſo they be not repugnant to faith and good manners. But in hiſtoricall things, Saint *Auſtin* tells us, that we muſt chiefly adhere to the literall ſenſe; and it is a Maxime in the Schooles, that we muſt not reject the literall ſenſe, which is not contrary, *agendis aut credendis*, to the Creed or the Law: neither is it unlawfull to conclude Philoſophicall points from the letter of Gods word, ſeeing there is but one truth in Divinitie and Philoſophie. But to conclude Philoſophicall points flat contrary to the letter of divine Scripture, as you doe, is too much boldneſſe: therefore, I will ſpeake to you in the words of Saint *Auſtin*, writing of the Philoſophers of his time; *Quicquid de tuis voluminibus his noſtris literis contrarium protuleris, aut aliqua facultate oſtendamus, aut nulla dubitatione credamus eſſe falſiſſimum.* Your aſſertion of the Earths motion, is contrary to the letter of the Scripiture; therefore we doubt not to ſay, is it moſt falſe. As for our ignorance of your Aſtronomicall grounds, it is excuſable, ſeeing your owne ignorance is the cauſe of it: how can the

Vincent. Lyr. adver. Hæreſ.

Vincent. ibid.

Cont. Lanſbergum.

L. 8. De Geneſ. ad lit. c. 1 & c. 2.

L. 1. De Geneſi ad liter. c. 21.

Scholar know, if the Maſter be ignorant himſelfe of theſe Principles which he undertakes to teach; or knowes not which way to make them intelligible? How can the blinde lead the blinde? *Non obtuſa adeo geſtamus pectora.* We are not ſo dull but we can underſtand other Principles: but yours being *Chimera's*, fictions, non entities; having no other ground but your owne phanſie, cannot informe our underſtandings which have entities for their objects.

9. *No councell hitherto* (ſay you) *have cenſured this opinion for an Hereſie. Anſw.* The Church by her councells doth not preſently cenſure Hereſies; ſhe knowes beſt her owne times and ſeaſons, and reaſons too. The Phyſician doth not alwayes in the beginning of a diſeaſe, preſcribe purging phyſicke. 2. From the Churches forbearance to cenſure an Hereſie, you muſt not conclude the nullitie of an Hereſie: for the Hereſies of *Arius*, *Macedonius*, *Eutyches*, and *Neſtorius*, were Hereſies, before they were cenſured by the four generall Councells. And the Church, ſaith Saint *Auſtin*, ſuffers and beares with many Heretickes, ſo long as they doe not pertinaciouſly maintaine, nor maliciouſly (to the diſturbance of the Church) ſpread abroad their falſhoods; *Quod ſi fecerint, tunc pellantur.* Many are Heretickes *in foro Cœli*, which are not *in foro Eccleſiæ*: and he is not onely an Hereticke which denieth an Article of the Creed, but he alſo that gain-ſayeth any plaine place of Scripture. The broacher or maintainer of any falſe and new opinion, is an Hereticke ſaith Saint *Auſtin*. 3. Either you have not read, or have not obſerved the cenſure of *Galilies* opinion by the councell of Cardinals; who not onely call it a falſe opinion, erroneous in the faith, a doctrine contrary to the holy Scripture: but alſo in plaine tearmes they call it Hereſie. 4. When you ſay that *Fromundus* calls it a raſh opinion, bordering upon Hereſie, that *Paul* the Third was not ſo much offended at *Copernicus*, when he dedicated his booke to him; that the Fathers of *Trent* call Epycicles and Eccentrickes, but fictions: theſe are ſuch weake helps to ſupport your cauſe, that if you leane on them, they will prove no ſtronger then reeds or cob-webs: if I ſhould inſiſt on them, I ſhould but diſcover your weakneſſe, in alledging of them. And likewiſe, your inſtancing of *Shonbergius*, who importunately begged the Commentaries of *Copernicus*: was it not rather out of curioſity to ſee how he could defend ſuch an abſurd Paradox, then out of true affection to embrace it? So *Herod* deſired to ſee Chriſt; I doubt not but many will deſire to ſee your booke of this ſubject, which (I dare preſume) will never be of your

Lib quæſt. Evang. in Mat. q. 12.

Lib. de utilit. credend. c. 1.

Le Mercure Franc. an. 1633.

your opinion. Laſtly, where as you ſay, *It is abſurd not to aſſent to any thing in naturall queſtions, but what authority ſhall allow of.* I ſay, it were both abſurd and dangerous for mens ſoules, and the peace of the Church, if men were ſuffered to aſſent to any abſurditie, againſt Scripture, ſenſe, reaſon, and the Churches authority.

CHAP. II.

1. *Wee muſt beleeve the Scripture, not our own phanſies.* 2. *The Scripture never patronizeth a lye or an error, nor doth it apply it ſelf to our capacity in naturall things, though it doth in ſupernaturall myſteries.* 3. *Wee muſt ſtick to the literall ſenſe, when the Scripture ſpeaks of naturall things.* 4. *Some particular Scriptures vindicated from our adverſaries falſe gloſſes: as namely,* Pſal. 19. *of the Suns motion like a Gyant and Bridegroome, to the ends of heaven: And of his heat,* Eccleſ. 1. *Of the Suns riſing and ſetting.* Joſh. 12. *Of the Sunne ſtanding ſtill, of the midſt of heaven; how over* Gibeon, *and how no day like that.* Eſay 38. *Of the Sunnes returning tenne degrees; of the greatneſſe and meaning of this miracle: whether knowne to the Gentiles. The teſtimony of* Herodotus *concerning this.*

IT *were happy for us* (ſay you) *if we could exempt Scripture from Philoſophicall controverſies.* And I ſay, It were happy for us, if all Philoſophicall controverſies could be decided by Scripture; or if men would be ſo modeſt, as to reſt contented with Scripture phraſes, and expreſſions of ſuch Philoſophicall points, as are mentioned there: But what hope is there to end controverſies, when many are ſo wedded to their own phanſies, that neither will they yeeld to Scripture, except they may have leave to interpret them; nor to reaſons, except they may have leave to forme them; nor will they truſt their own ſenſes, but will captivate and enſlave them alſo to their groundleſſe imaginations? The Scripture tells us in plaine tearmes, the Earth is immoveable: our ſenſes doe aſſure us, and many reaſons which I have heretofore alledged, induce us to beleeve the truth of this aſſertion: and yet you ſpurning at Scripture, ſenſe, and reaſon, as if your phanſie were *inſtar omnium*, would have our judgements, ſenſes, Scripture, Church, and all regulated by your abſurd dictates; therefore it is an unreaſonable thing in you, to deſire that the holy Ghoſt ſhould not be Judge of his owne aſſertions in naturall truths; and that there ſhould be more credit given to your conceits, (which you call induſtry and experience) then to Gods own words. Indeed this travell hath God left to the ſonnes of men, to be exerciſed with, as a puniſhment for their ſins; to toile and labour all their dayes about ſhadowes, imaginations, and indeed meer nothing; groping at the doore of knowledge (like blinde Sodomites)

all their dayes, and cannot finde it; ſo that they who have ſpent their whole life in Aſtronomie, may with Saint *Peter*, ſay on their death bed; *Maſter We have laboured all night, but have caught nothing.* Thus with *Martha*, they are buſie about many things, and neglect that one thing which is onely neceſſary.

2. It is but a conceit of yours to ſay, *That the Scripture accommodates it ſelfe to the vulgars conceit, in ſaying, the Sunne riſeth and falleth, &c.* I warrant you, if the vulgar ſhould conceive that the heavens were made of water, as the *Gnoſtickes* held; or that the Sunne and Moone were two ſhips, with the *Manichees*; or that the world was made of the ſweat of the *Æones*, with the *Valentinians*: or whatſoever other abſurd opinion they ſhould hold, you would make the Scripture ſay ſo, and to accommodate it ſelfe to their conceits. The ſtability of the Earth, and motion of the Heaven, are abſurd and falſe opinions in your conceit; and yet the Scripture affirmes them. You are as unapt I know to beleeve that the Sunne moves, as others are that it ſtands ſtill; therefore it's a wonder you do not begin to call the Scripture authority in queſtion, that affirmes the Suns motion: ſeeing you ſay men would be apt to doe ſo, if the Scripture had ſaid, the Sunne ſtandeth, &c. How ſhall the Scripture pleaſe both parties? if it ſay the Sun moveth, your ſide will except againſt it: if it ſay the Sun ſtandeth, ours will be offended at it. Why ſhould the Scripture be more loath to offend us then you, except it be becauſe we are the ſtronger ſide; and we have our ſenſes to witneſſe with us, which you have not? I wiſh you would conceive a more reverend opinion of the Spirit of truth, who cannot lie; nor will affirme a falſhood upon any pretence whatſoever; neither will he countenance a lie, to confirme a truth; or ſpeake falſe in one thing, that wee may conceive his meaning the better in another thing. He needs not ſuch weake and wicked helps as falſhoods, to make us underſtand his will; his word is ſtrong and mighty in operation; it's the power of God unto ſalvation; a ſharp two edged ſword; his hammer, his ſcepter, &c. As it ſtands not with his truth to affirme a lie, ſo doth it no wayes conſiſt with the power of his Word and Spirit, to helpe our underſtanding by a lie.

3. You ſay, *That if the Scripture had ſaid, the Earth riſeth and ſetteth, and the Sunne ſtands ſtill; the people being unacquainted with that ſecret, would not have underſtood the meaning of it.* *Anſw.* What matter is it whether they had underſtood it or not? For you tell

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us that theſe things are not neceſſary in themſelves; and that it is beſides the ſcope of theſe places, to inſtruct us in Philoſophicall points. Will you have the holy Ghoſt then ſpeake a falſhood? for feare leſt we ſhould not underſtand the meaning of a ſecret, which is not neceſſary for us to know: if it be not needfull for us to know whether the Earth ſtands or not; ſo it was leſſe needfull for the Scripture to ſay the Earth ſtandeth, when it doth not ſtand. But you doe well to call the motion of the Earth a ſecret, for ſo it is a great ſecret, hid from the wiſe and prudent of this world, and revealed onely to ſuch babes as your ſelfe. But why is this a ſecret? If it be a naturall effect, it is no ſecret; for though naturall cauſes doe not incurre into our ſenſes, yet the effects doe; and if this be a ſecret effect and not ſenſible, it cannot be an effect of nature; but I thinke it be ſuch another ſecret as the Philoſophers ſtone, which never was, and never ſhall be.

Though it be beſide the chiefe ſcope of Scripture to inſtruct us in Philoſophicall points: yet it will not follow, that theſe Philoſophicall tearmes are to be otherwiſe underſtood, then as they are expreſſed. There be many Geographicall, Hiſtoricall, and Chronologicall paſſages in Scripture, mentioned incidently, and not chiefly to inſtruct us in ſuch points: ſhall we therefore underſtand them otherwiſe then they are ſet downe, or rather the cleane contrary way? But when you ſay the Earths motion is beyond our reach; I grant it: becauſe we cannot reach that which is not made manifeſt to us, either by ſenſe or reaſon, or divine authority; If you can either of theſe wayes make it appeare, I doubt not but our underſtanding will reach it: and if you cannot one of theſe wayes make it appear to us, we will account it a meere nothing. For *idem eſt non eſſe, & non videri:* and indeed you ſay well out of the Gloſſe, that God doth not teach curioſities which are not apprehended eaſily; for your motion of the Earth is an incomprehenſible curioſity. And it is well ſaid by you againe, that the Scriptures authority might be queſtioned, if it did teach naturall things contrary to our ſenſes; and therefore if any booke of Scripture ſhould affirme, as you doe; that the earth moves naturally and circularly, I ſhould verily beleeve that that booke had never been indicted by the holy Spirit, but rather by a Pythagorean ſpirit, or by the ſpirit of Dutch beer.

You condemne Tertullians *Heretickes for wreſting Scripture a wrong way, and forcing it to ſome other ſenſe agreeable to their falſe imagination; and rather then they would forgoe their tenents, yeelded the Scripture to be erro-*

erroneous. De te fabula narretur. You retch the Scripture a wrong way, forcing it to your falſe imaginations; you do not indeed call the Scripture erroneous, but you make it to ſpeake one thing, and meane the cleane contrary; therefore, you ſhall doe well to apply Saint *Auſtins* counſell to your ſelfe, and doe not ſettle your opinion raſhly on that darke and obſcure conceit of the Earths motion. It is true alſo what you alledge out of Saint *Auſtin*, that the holy Ghoſt being to deliver more neceſſary truths, left out to ſpeake of the forme or figure of Heaven, &c. becauſe hee would not have us ſpend too much time in theſe things, and neglect the meanes of ſalvation; but you ſhould have done well to have ſubjoined the following words of that ſame Father, to wit; *That is true which is affirmed by divine authority, rather then that which is gueſſed at by humane infirmity.* For there he ſpeakes of Philoſophicall points, which ſeeme to be contrary to Scripture: but you are miſtaken when you ſay, *that God deſcends to our capacity in naturall things; and conformes his expreſſions to the miſtake of our judgements, as he doth apply himſelfe to our apprehenſions, by being repreſented like a man.* There is infinite oddes betweene God and naturall things; wee that are corporall cannot underſtand ſpirituall things, much leſſe that infinite Spirit, but by familiar expreſſions; yet ſuch as doe in ſome ſort repreſent his attributes to us: as he is ſaid to have eyes, hands, &c. by which are ſignified his knowledge, operations, &c. But for naturall things there was no ſuch neceſſity, becauſe naturall men, by natures light are able to underſtand naturall things: ſo wee know what a circular motion is; and if the Earth did truely move, we ſhould as ſoon apprehend the motion of it, as we do the Suns motion: therefore, there was no need why God ſhould deſcend to our capacity in affirming an untruth, becauſe wee cannot underſtand the Earths motion. God then doth not conforme his expreſſions to the errour of our judgements; for our judgements doe not erre in this; but he ſpeakes according to the truth of the thing, which wee judge and apprehend as it is. We apprehend the fire to be hot; if you were of an opinion that it were cold, (which you may as well maintaine as the Earths motion) you would doubtleſſe tell us, that the Scripture in ſaying the fire is hot, applies it ſelfe to the vulgar errour or miſtake of our judgements; thus you may make the Scripture to ſerve you for defence of any abſurdity, by uſing ſuch a ſubterfuge, and running into ſuch a ſtarting hole.

In Gen. ad literam.

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4. *You examine thoſe particular Scriptures which are urged to prove the*

the Suns motion, and you tell us that they are ſpoken in reference to the appearance of things, and the falſe opinions of the vulgar; and in the 75. pag. of your Booke, you ſay it is a frequent cuſtome for the holy Ghoſt to ſpeake of naturall things, rather according to appearance and common opinion, then the truth it ſelfe. I would 1. know if this conſequence be Logicke; the holy Ghoſt ſpeakes of naturall things according to appearance, frequently, and of ſome, *ergo* continually, and of all; or particularly of this; to wit, the Earths immobility. The Scripture oftentimes ſpeakes of God according to mens opinion and capacity; as, that he is angry, that he repents, &c. *Ergo*, the Scripture ſpeaks ſtill of God thus: and ſo, when the Scripture ſayes, that God is a Spirit, or juſt, or infinite, or eternall; that may be underſtood (if your Logicke be good) according to opinion or appearance; this will prove a dangerous kind of reaſoning. 2. Why doth not the holy Ghoſt tell us in plaine tearmes, that the Earth moves, if it doth move? what end hath hee to tell us that it is immoveable? Is it becauſe we are not capable to underſtand ſuch a high myſterie? that is ridiculous. For is it a greater myſterie then Chriſts Incarnation, Reſurrection, Aſcenſion, &c. which are ſet downe in plaine tearms? but indeed it is no myſterie; it's eaſie to underſtand the Earths motion, if it did move. Or is it becauſe the holy Ghoſt would not give offence to the world, in telling them plainly that the Earth moved, being an opinion ſo repugnant to ſenſe and reaſon? Then doubtleſſe he would not have told us, that the Sun and Moone ſtood ſtill at *Joſhua's* command; or that the Sea was divided by *Moſes* Rod; and thoſe other miracles of holy Writ, as much repugnant to ſenſe and naturall reaſon, as the Earths motion is: the holy Ghoſt uſeth not to hide or mince the truth, for feare of offending men. 3. There is great oddes betweene aſſeverations and alluſions; betweene the affirmation of a truth, and an alluſion to a fiction. The Scripture ſpeaking of perverſe men that will not heare Gods word, alludes to the fiction (as you call it,) of the adder ſtopping his eare; *ergo*, when the Scripture ſpeakes of the Earths immobility, it ſpeaks according to common opinion. A goodly conſequence; as if you would ſay, the Scripture ſpeakes figuratively of Chriſt, when it calls him a Lamb, a Doore, a Vine: *ergo*, when the Scripture ſpeakes of the beheading of *John Baptiſt*, it ſpeakes according to common opinion: if there be no better Logicke taught in the Univerſities of the Moone, we will never ſend our Sons thither. 3. It is a rule in Saint *Auſtin*, that we ſhould expound Scripture as

the Saints have expounded it before us; *Quomodo hæc verba intellexerunt Sancti, ſic utique intelligenda ſunt:* But name me that Saint that ever expounded theſe Scriptures, which ſpeake of the Heavens motion, and of the Earths immobilitie, according to appearance and common opinion. Of St. *Auſtins* minde was the ſixth generall Councell, prohibiting any man to interpret Scripture, otherwiſe then the Lights and Doctors of the Church, have hitherto expounded them by their writings; which Canon is confirmed in the eleventh Seſſion of the third Lateran Councell. 5. The ancient Fathers warne us, that we doe not deviate or depart from the literall ſenſe of Scripture, ſo long as no abſurdity doth follow thereupon: now, no abſurdity doth follow upon the literall ſenſe of the Earths immobilitie; but upon your ſenſe and expoſition many abſurdities follow; therefore we muſt not depart from the literall ſenſe. 6. Where the holy Ghoſt ſpeakes obſcurely and figuratively in one place, hee doth in another place open himſelfe in plaine tearmes, as Saint *Hieroms* obſerves: but ſpeaking of the Earths immobilitie, he uſeth ſtill the ſame phraſes; neither doth he explaine himſelfe otherwiſe in any one place; which doubtleſſe hee would have done, if he had meant otherwiſe then hee ſpoake. 7. I abſolutely deny that the holy Ghoſt ſpeakes of naturall things, otherwiſe then in truth and reality; and not (as you ſay,) according to common opinions. As for your expoſitions of theſe Scriptures which are for us, and your inſtances againſt our opinion; they are wreſted, and falſe, and impertinent, and of no ſoliditie, as we will ſhew by our anſwer or reply to each of them ſeverally.

De verbis Domini, Ser. 18.

In Iſai. c. 19.

1. It is uſuall with you to cut your throate with your owne ſword, and to bring paſſages againſt your ſelfe; for you would prove that the Scripture ſpeakes of the Heavens motion, in reference onely to the Vulgars falſe opinion; becauſe, *The Sunne is in his glory like a Bridegroome; and in his motion like a Gyant.* I anſwer, if the Sunne be in his motion like a Gyant, then ſure the Sunne hath motion; for how can that which is not, be compared to that which is? Similitudes cannot illuſtrate non entities. 2. If the Sun were not a glorious creature, *David* had not compared his glory to the glory of a Bridegroome; ſo conſequently, if the Sun had beene without motion, he had not compared his motion, to the motion of a Gyant: if there be no motion in the winde and thunder, it had been idle to give wings to the one, or arrowes to the other, as *David* doth. 3. Will you make the Scripture not onely aſſert a falſhood

Pſal. 19.

falſhood in poſitive tearmes, but alſo bring ſimilitudes to illuſtrate it? this is to make the holy Ghoſt a cherisher, fomenter, and maintainer of untruths; for ſo it muſt be, if the Sunne move not, the Scripture ſhewing it doth move, and declaring by ſimilies how it doth move. 4. What conſequence is this? The Scripture compareth the Sun to a Bridegroome, and a Gyant; *ergo*, the Scripture ſpeaking of the Suns motion, ſpeakes in reference to the falſe opinion of the Vulgar? it is all one with this: The Goſpel compares Chriſt to a Bridegroome; *ergo*, the Goſpel ſpeaking of Chriſts humanity, ſpeakes in reference to the falſe opinion of the Vulgar. 5. There is ods between poſitive ſpeeches and compariſons; the Sun is never called a Bridegroome in Scripture, but is ſaid to be like a Bridegroome: *Simile non eſt idem.* But in Scripture ſtill, the Sun is ſaid to move, and the earth to be ſtable, in poſitive tearmes. 6. That *David* in this compariſon did allude to the phanſie of ignorant people, ſuppoſing the Sun by night to reſt in a chamber, is but your groundleſſe conceit: you might ſay rather that he alluded to the fiction of Poets, deſcribing *Aurora* to go to bed every night with *Tythonus*; *Tythonis croceum linquens Aurora cubile*: or to that golden bed which *Vulcan* made him; in which he is carried through the Sea. Τὸν μὲν γὰρ δυὰ κῦμα φέρει πολυήρατος ἠὼς. But neither to this pleaſant bed, nor to that of *Tythonus*, nor to the Vulgar conceit doth *David* allude; but ſimply ſets out Gods Majeſty in the glory of the Sunne, by a familiar example, taken from the glory of a Bridegroome coming out of his chamber. 7. This former part of the Pſalme is interpreted by the Fathers myſtically of Chriſt, whoſe motion and alacrity to run his race from the wombe to the grave, from heaven to earth, and from earth to heaven; I hope you will not ſay, are to be underſtood in reference to the falſe opinion of the Vulgar. 8. He is not compared to a Gyant, in reſpect of his bigneſſe in the morning, (as you ſay) no more then he is to a dwarfe, in reſpect of his littleneſſe at noone; but in reſpect of the indefatigable ſwiftneſſe of his motion, he is compared to a mighty runner: for there is no mention made of a Gyant in the Hebrew text, neither was it fit to compare him to a Gyant. 9. Nor doth *David* allude to the Vulgar opinion, when he ſpeakes of the ends of Heaven; for in a round globe or circle there are no ends: but he ſpeaks with relation to the Hemiſphere, which you muſt needs yeeld hath ends; for it terminates and ends in the Horizon, called therefore Finitor. Beſides, in the Hebrew, Greeke, and Latine texts, it is not ſaid, the

ends; but the remoteſt parts of Heaven: and ſo you cannot deny but ſome parts are remoter from us then other parts. 10. Neither hath the Scripture any reference to the common miſtake, as if the Sun were actually hot, when it ſaith, (*nothing is hid from the heate thereof:*) theſe Philoſophers who deny any actuall heat in the Sun, yet ſay the Sun is hot: and I doubt not but you have ſaid ſo many a time, and yet you have no reference to any actuall heate in the Sun. Do not you uſe to call cinnamon-water, and ſuch like diſtilled waters, hot waters? and yet they are actually cold. Philoſophers tell us that *Saturne* is cold, and yet they doe not thinke that he is the ſubject of cold, but the cauſe onely. The Scripture ſaith, *That none can avoid the anger of God*; and yet you will not ſay that this paſſion is in God. The Sunne then is hot, not by any heate in him, but by calefaction from him.

Eccleſ. 1. 2. When the Scripture ſaith, *The Sunne riſeth and goeth downe*; this is not ſpoken in relation to the circumferenee which is equally diſtant from the Center; but in reference to the Horizon as you confeſſe, or rather to the ſcituation of Judea; and ſo of other Countreys: and in this reſpect, the Sunne doth not onely ſeeme, but doth in very deed riſe and fall to the Inhabitants. For doth not the Sunne truely aſcend when he comes to your meridian, and truely deſcend, when he removes from it? Doth he not truly aſcend and deſcend, to thoſe who have him for their Zenith in their meridian? Aſtronomers tell us that there is a true and reall riſing and falling of the Starres, as well as an apparent; and then are they not truely ſaid to riſe and fall, when they doe truely aſcend above, and deſcend beneath the Horizon? If the Sunne doth not truely aſcend and deſcend, then the ſhadowes doe not truly increaſe and decreaſe; and ſo our Sun-dialls doe not truely ſhew us the hours of the day, but in ſhew onely, and in appearance; but wee ſee that the ſhadow ſtill decreaſeth, as the luminous body aſcendeth, and encreaſeth as that deſcendeth. *Virgils Tytirus* can tell you ſo much:

Majoreſque cadunt altis de montibus umbræ,
Et Sol diſcedens creſcentes duplicat umbras.

Joſh. 12. 14. 3. *Joſhua* ſaith, *That the Sunne ſtood ſtill in the midſt of heaven: Now, Heaven* (you ſay) *hath no midſt but the Center, and ſo this is alſo ſpoken in reference to the Vulgar opinion. Anſw.* By the Center, either you muſt underſtand the Earth, or the Sunne; the Earth indeed is in the midſt of the world, but not in the midſt of Heaven; for it is not there at all: if it were, Chriſt needed not to aſcend to Heaven, being

being in the midſt of it, when he was on the earth. Wicked men then would have the beſt of it; for as they have the largeſt poſſeſſions on earth, ſo ſhould they have the largeſt ſhares in heaven. If by the Center you meane the Sunne, then you ſpeake in reference to the Vulgar opinion; for the Center is in the midſt of Heaven, the Sunne is the Center; therefore the Sun is in the midſt of Heaven, and ſo *Joſhua* ſaith. 2. By the Heaven he doth not underſtand the whole celeſtiall Globe, but the Hemiſphere; and ſo this having its Horizon or outmoſt limits and extreames, muſt alſo have its middle: and what can that elſe be, but the Meridian paſſing through the Zenith? Thus then it is demonſtrable that whatſoever is equally diſtant from the extreames is in the midſts; but the Sun being in the Zenith or Meridian, is equally diſtant from the extreames: therefore the Sun being in the Zenith, is in the midſt of Heaven. 3. The Hebrew Doctors tell us, that when the Sun ſtood ſtill, hee was then in the Summers ſolſtice; being the Tropicke of *Cancer*; from which Judea is not farre diſtant: and ſo in that regard alſo *Joſhua* might truly ſay, that the Sunne was in the midſt of Heaven, being then over their heads. 4. If it be a vulgar opinion to ſay, that the Sunne is in the midſt of Heaven; then all the chiefe learned both in Divinitie, Philoſophie, and Poetrie, ſpeake as the Vulgar doe; for they uſe the ſame phraſe: hence came the word Meridian, *Meridies*, Mid-day, Mid-night. If the Sunne were not every day in the midſt of Heaven; how ſhould the Artificiall day be divided into equall parts? Therefore *Clavius* tells us, that the Meridian is called by Aſtronomers, the midſt of Heaven; the line of the midſt of Heaven, &c. And the Prince of Poets ſpeakes both of the Sunne and Moone in the midſt of Heaven:

In cap. 2. Sphæræ ſa-cro Boſc.

Jam medium Phœbus conſcenderat igneus orbem. *Geor. 4.*
Phœbe—— *Æn. 10.*
Noctivago curru medium pulſabat Olympum.

5. I would know of you if all Vulgar opinions be falſe. That (I hope) you will not ſay: If then the Vulgar ſpeake ſometime truth, why may not the Scripture ſpeake truth with the Vulgar? or why ſhould truth be of leſſe eſteeme, becauſe vulgar? it ſhould be otherwiſe, for, *Bonum quo communius eo melius.*

It is ridiculous to think with you, that the Sun was over Gibeon *only in appearance and vulgar conceit:* For indeed the Sun was truly over *Gibeon*, although he was no more over that then over other places. Suppoſe you were in *Pauls* Church, and divers others were there too;

is the roofe of that Church over your head only in appearance and vulgar conceit, becauſe it is over other heads as well as yours; or becauſe it is much larger then your head? Or muſt that phraſe be thought improper, the roofe is over your head? 2. The figure Eclipſis is frequent in Scripture, when there are ſome words wanting in a phraſe which are to be ſupplied: as, 2 *Sam.* 6. 6. *Uzza put forth to the Arke*, is underſtood, *his hand*. So 2 *Chro.* 10. 11. *I with Scorpions*, is underſtood, *will chaſtiſe you*. So here, *Sun ſtand ſtill in Gibeon*, is underſtood, *while we are fighting*? and ſo the words muſt be rendred: Stand ſtill whileſt we are fighting in *Gibeon*; for not onely the city, but its territories where *Joſhua's* army was, are called by the ſame name. So, *Moon in the valley of Ajalon*, is underſtood, *goe not downe*.

Theſe words, (*There was no day like that before it, or after it*) you ſay, *are not to be underſtood abſolutely, but in reſpect of the vulgar opinion; becauſe there be longer dayes under the Pole. Anſw. Joſhua* ſpoke not this with any reference to vulgar opinions, but to the Climate in which he lived, and where the miracle was ſhewed; it was the longeſt day that ever was in thoſe parts; and what reaſon had he to except the dayes under the Poles, being nothing to his purpoſe? When Chriſt ſaith, *There be twelve houres in the day*, his words cannot be underſtood abſolutely; for there be more houres where the Horizon hath any obliquity; and the higher the Pole is elevated above the Horizon, the more houres have the dayes in Summer; yet his words are true, *in ſphæra recta*, and in thoſe Countreys that are under and neere the Line. And what will you conclude from this? that becauſe theſe and ſuch like phraſes, are not to be underſtood abſolutely; therefore this phraſe (the Sun moves,) is not to be underſtood abſolutely? But I will reply. Theſe phraſes are true in reſpect of the Climate they were ſpoken of; *ergo* this phraſe alſo, (the Sun moves) is true, in regard of the Climate it is ſpoken of. If then Judea be the place where the Earth is ſtable, and the Sun moves, your opinion is quite overthrown by the force of your own inſtance: for if the Earth be immoveable in any Climate, and the Sun moveable, we have that which we deſire: it lieth on you to ſhew how, and why the Sun ſhould move there, and not elſewhere; why and how the earth moves here and not there. 2. Theſe words of *Joſhua's*, perhaps have no reference to the length of the day, although the vulgar Tranſlation read it ſo; but rather to the greatneſſe of the miracle, the Heavens hearkening to the voyce of a mortall man. *Joſhua* acknowledgeth, *That never any ſuch day was before*

or since, that the Lord hearkned to the voyce of a man: For so the Hebrew and Greeke read it. *Esay* 38.8.

4. The Scripture saith, *That the Sun returned ten degrees in the dyall of Achaz*; this you will have to be understood of the shadow only: So I perceive the Sun and the shadow, light and darknesse, is all one with you. Take heed of the *woe* denounced against them *that call light darknesse, and darknesse light:* Why may you not in other places, aswell as in this, by the Sun understand the shadow: as, *At Joshua's command the Sun stood still*; that is, the shadow stood. *Wee shall shine as the Sun*, that is, wee shall be dark as the shadow? 2. You mince the miracle, and the power of God too much; for, is it not as easie for him to make the *Sun* goe back, as to make the *shadow* returne? Wherein is his absolute Soveraignty seen, and his transcendent puissance, but in the obedience of all creatures, even of the Sun, Moon, and Stars, to his commands? St. *Austin*, disputing against the Gentiles, sheweth them, *That Nature is not the supreme guider of all things*; and hee instanceth in the standing, and going back of the Sun. His Argument had bin of no force, had not the Sun moved at all, as you think. 3. If the shadow moved onely without the Sun, then either that shadow moved it self, which is ridiculous to think; or it was moved by the motion of the dyall, or of the gnomon and index of the dyall: Now, if the dyall or gnomon was moved by God or an Angel, tell us where you read it. Why might it not as well be turned about with a mans hand, or by some engine, and so this would have bin a suspected miracle; or else the shadow returned according to the motion of some other luminous body, & so this were to multiply miracles needlesly; for 1. that light must be created for that purpose. 2. It must have a particular motion of its own. 3. It must be a greater light then that of the Sunne, otherwise the shadow had not beene discernible. 4. It must either be united to some other light, or else vanish; all which was needlesse: is it not safer then to adhere to Gods word? from which when we wander, we fall into many by-wayes. And whereas you tell us, *That the miracle is proposed onely concerning the shadow:* I answer, we are not to consider so much what is proposed, as what was effected. God useth to effect more, then he proposeth, and to performe more then he promiseth. 2. You say, *There would have been some intimation of the extraordinary length of the day, as it is in that of Joshua:* I answer, there was no such reason, why the length of this day should be mentioned; because this day was much shorter then *Joshua's*, in respect it fell out in the

2 *King.* 20 11.

De Civit. lib. 21. c. 8.

Vide in Joſuam Munſter. Lyram, &c.

the winter ſolſtice; whereas that of *Joſhua* was in the ſummer ſolſtice, as the Hebrew Doctors obſerve. 3. Had the Sunne returned, *This had been* (you ſay) *a greater miracle then thoſe which were done on more ſolemne occaſions. Anſw.* God regards not the ſolemnity of occaſions, in ſhewing of his miracles; if he had, Chriſt had never wrought his miracles in obſcure and remote places, as hills and deſerts: He would rather have ſhewed his transfiguration in Jeruſalem, to all the world, then upon Mount Tabor, onely to three Diſciples. He uſeth his miracles, as he did the loaves; he beſtowed ſeaven loaves on foure thouſand men, and but five loaves upon five thouſand: on ſmall occaſions God ſometimes produceth great miracles, and upon great occaſions ſometimes hee ſheweth none. 2. We muſt looke rather to the fitneſſe of the miracle, then to the ſolemnity of the occaſion: the Sunne repreſented the King, who was the life and glory of his kingdome. God would let him and all men ſee, that as he onely hath power to rule, and alter the courſe of the Sunne; ſo it is he onely, that rules and turnes the hearts of Kings: the Sunne was obedient to Gods command, ſo ſhould the King be. As the Sun moves to and fro, ſo doth the ſhadow; and as the King is affected, ſo is the people. The going down of the Sunne bringeth ſadneſſe on the earth, ſo doth the death of a King. 3. The occaſion of this miracle was not ſo ſmall as you take it; the ſickneſſe, prayers and teares of a good King; the prayers of a great Prophet, the affection that God would ſhew his people, in delivering them from the hand of Aſſyria; and the love that hee carried to ſuch a King, that rather then his faith ſhall faile, the Sunne ſhall change his courſe; and the leſſon that he would teach us, that wee ſhould honour Kings, whom God doth ſo much honour; as to make the King of Planets ſtand ſtill at the requeſt of one, to goe backe at the petition of another: theſe I ſay were the occaſions of this miracle. 4. The going backe of the Sunne is not a greater miracle (as you ſay) then his ſtanding ſtill; for the ſtanding of the Red-ſea, was as great a miracle, as the going backe of Jordan. 5. The ſhadow in the hiſtorie of the Kings is onely mentioned, becauſe the ſhadowes moving was more viſible then the Suns. 6. *This ſigne* (you ſay) *appeared not in the Sunne, becauſe the wonder was done in the land. Anſw.* The ſigne was in the Sunne, and that the Babylonians ſaw; they ſent to know the wonder, that is, what ſtrange effect it had done in the land of Judea. There be oftentimes ſtrange Prodigies in the Aire, which cauſe ſtrange effects on the Earth. If I ſhould ſend to Italie,

Italie or Germanie, to know of ſome ſtrange Prodigies ſeene there in the Aire; and if I ſhould enquire what wonder or effect theſe had wrought in the land, or in theſe countreys; would you conclude that there was no prodigious ſigne at all in the Aire? The Wiſemen ſaw a new Starre, which ſhewed to them the miraculous birth of a new King; becauſe they came to Judea, to ſee the wonder done in the land: you will therehence conclude, that there was no ſigne at all in the Heaven, neither Starre, nor motion of a Starre.

7. *You doubt of the truth of the Sunnes going backe, becauſe no mention of it in ancient Writers:* But if you will doubt or deny all paſſages and miracles of Scripture, which are not mentioned by the Heathen writers, our Bible will be reduced to a ſmall hand full: they mention not the ſtanding of the Sunne, will you deny that too? But you reply, *That they had ſome light of it, by alluding to it in the Fable of Phaeton, when the Sun was ſo irregular in his courſe, that he burned ſome part of the world:* but indeed, this ſeems rather to allude to the Suns going backe, then to his ſtanding; for an irregular courſe is more like a retrograde motion, then a ſtanding ſtill. But it is moſt likely that this Fable alludes to the conflagration of Sodome, and the other cities of the plaine: but however the Gentiles were not ignorant of this miracle, as may be ſeen by that meſſage ſent to *Ezechias* by the Babylonians, who were then the onely Aſtronomers. And Saint *Auſtin* proves, that this miracle was knowne to the Heathen, by that Verſe in *Virgil:* 2 *Chr.* 32. 31

Siſtere aquam fluviis, & vertere ſidera retro:

Aſcribing both the ſtanding of the Red-ſea, and of Jordan; and the going backe of the Sunne, to Art, Magicke, which the Scripture attributes to the power of God. But *Joſephus* in his firſt booke againſt *Apion*, will tell you the reaſons, why the Gentile writers made little mention of the Jewiſh affairs and miracles; partly out of ignorance; as knowing little or nothing of the Jewes; becauſe they were not a people given to travell, ot merchandiſing, and dwelt not in maritime towns: and partly out of malice to that Nation, they concealed Gods love to them, and the wonders done amongſt them; and indeed moſt of the ancient Records by injury of time, fury of fire and waters, and neglect of thoſe that ſhould have kept them are loſt; both amongſt the Gentiles and the Jewes, as thoſe Bookes of the Kings of Judah and Iſrael, which are onely named in Scripture. *De civit. Dei l. 21. c. 8.*

You reject the teſtimony of *Herodotus* concerning the returning *L. 2.*

of the Sunne, (which he calls the riſing of the Sun in the Weſt;) becauſe he exceeds in the computation of years: but by this means you will wrong all Hiſtorians, if you queſtion the ſubſtance of the ſtory for an errour in the circumſtance: an errour in the computation of time takes not away the truth of the thing it ſelfe. The *China* people reckon an incredible number of yeares from the Creation of the world; yet you will not deny but that they had ſome knowledge of the Creation, and that their relation of it is true. The Chaldeans and Egyptians reckon 4;2. thouſand yeares before the Floud; will you therefore ſay, they had no knowledge of the Floud? The Septuagints reckon from *Adam* to the Floud, 2262. yeares; whereas the Hebrews number onely 1656. yeares; and yet the Fathers reject not the Septuagints teſtimony concerning the Floud; but moſt of them alſo follow their ſupputation. And how doe you know but that *Herodotus* number of yeares may agree well enough with ours; ſeeing divers Countreys did reckon their years diverſly. The Arcadian year conſiſted but of three moneths: the Acarnanian of ſixe: the Roman at firſt but of tenne. The Egyptian year was various; for ſometime it conſiſted of thirteen months, ſometime but of foure, and ſometime of three onely, and of two, and of one onely ſometime. Therefore doubtleſſe *Herodotus* years were either Arcadian, or Egyptian; and ſo compare them with our yeares, you will finde that there is no ſuch oddes as you make: and that in ſpeaking of the Sunnes retrogradation, he hath not reference to the times that never were. And whereas you ſay that this miracle hapned when *Heſiod* flouriſhed, you faile in your Chronologie; for *Heſiod* was above a hundred yeares before this miracle was effected, if you will beleeve *Genebrard* and the other Chronologers.

Chron. l. 1.

You are a wiſe Philoſopher to tell us, that the ſhadow (as well as the heat and beames) is the effect of the Sunne. Can darkneſſe be the effect of light? a privation is a defect, not an effect: if the ſhadow were an effect at all, it ſhould be the effect of the darke and condenſate body, but not of the luminous. *Take heed that the light which is in you be not darkneſſe, for then how great will that darkneſſe be!*

CHAP. III.

1. *The Scripture doth not ſpeake according to vulgar opinion, when it calls the Moone a great light, for ſo it is.* 2. *Nor when it ſpeakes of waters above the Heavens, for ſuch there are.* 3. *Nor when it calls the Starres innumerable, for ſo they are.* 4. *Nor when it mentions the circumference of the braſen Sea to be thirty cubits, and the diame-*

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ter cause, for so it was. Why the lesser number is sometime omitted. 5. Nor in saying the earth is founded on the waters, which is true. 6. The right and left side of heaven how understood, and how the heaven is ἔμψυχον, and of the Intelligences. 7. The Scripture speaketh properly in attributing understanding to the heart. The Galenists opinion discussed. 8. Of ova aspidum, and the Vipers egges, how understood. 9. The Aspe or Adder how hee stops his eare. 10. Of the North and South winde in Scripture. 11. The Sun shall be truely darkned, the Moon turned to blood, and the starres shall fall, &c. 12. Of the Windes whence they come, &c. 13. The sea the onely cause of springs. 14. The thunder is truly Gods voice. 15. The 7. Stars.

IN this Proposition you goe about to shew us, *That the Scripture in naturall things conformes it selfe to our conceived errours, and that it speakes of things not as they are in themselves, but as they appeare.* And yet the testimony of *Vallesius* which you bring to help you, overthrowes you; for, *Whatsoever* (saith hee) *is in Scripture concerning Nature, is most true, as proceeding from the God of Nature, from whom nothing could be hid.* If the Scripture expressions of naturall things be most true, then they cannot agree with our erroneous conceits; for truth and errour agree like light and darkneſse: and you confesse your selfe that all naturall points in Scripture are certain and infallible; but in that sense (say you) wherein they were first intended, and that is the sense that you give; for you only are acquainted with the first intended sense of the holy Ghost, and so wee must take it upon your bare word that that onely is the true sense which your side delivereth: and I pray you what heresie may not be maintained by Scripture this way? for heretickes will also say, That all things in Scripture are true, certaine, and evident, in that sense which was at first intended; but when it comes to the point, it is the sense which they themselves have invented and obtruded. *Proem. Philosacr.*

The first instance which you bring for proof of your assertion, is from the Moon, which is called in Scripture, *One of the great lights; and yet by infallible observation* (say you) *may be proved to be lesse then any visible starre.* *Answ.* Other Astronomers will prove as strongly as you can, that *Mercury* is the least of all starres; shall wee beleeve you, or them? 2. Though I should yeeld that the Moon were a small starre in bulk, will it follow that therefore it is a lesser light? Must the light be intended, as the body is extended? I have seen a fire yeeld lesse light then a candle; *Mercury*, which you say is bigger then the Moon, hath not the hundreth part of that light which is in the Moon: so that if *Mercury* and the Moon should change places, yet the light of the Moon would not ap-

peare much leſſer, nor the light of *Mercury* much bigger: the eie which is the light of the body, is not the clearer becauſe the bigger; there is not ſo much light in an Oxe eie, as in an Eagle's: Divines hold, That the light which was created the firſt day, was no other then the light of the Sun diffuſed over the hemiſpheare; the whole hemiſpheare is much bigger, I hope, then the body of the Sun; and yet the world, I think, was not more enlightened the firſt day, then the fourth, when that diffuſed light was contracted and compacted in a narrower compaſſe. 3. To what end ſhould there be ſo much light in each ſtarre exceeding the light of the Moone? They received their light not for themſelves, but for us; (except you will ſay there be innumerable worlds, which muſt be enlightened aſwell as ours) but wee receive by many degrees more light from one halfe of the Moon, then wee doe from all the ſtarres together. Surely God made nothing in vaine; but in vain hath the ſtarres ſo much light, if man, for whom they were made, receive no ſight nor benefit from this light. 4. Aſtronomicall poſitions concerning the magnitude and heighth of each ſtarre, on which they ground their darke conjecture of light, are toyes and fictions of their owne heads: they make falſe Maximes, and on theſe they build confuſed Babels of their owne conceits: yeeld to them that they have the ſemidiameter of the earth, and then

Graculus eſuriens ad Cœlum juſſeris ibit;

Every ſmatterer will exactly tell you the height and bigneſſe of each ſtarre,

Haud ſecus ac ſi oculo rubricam dirigat uno.

5. I will tell you what St. *Auſtine* ſaith of this Queſtion, and of the Aſtronomers of his time: Let them (ſaith hee) talk of heaven, who have but ſmall intereſt in heaven; wee confidently beleeve that theſe lights are greater then others, which the Scripture commends to be ſuch. Let them give us leave to truſt our owne eyes; it is manifeſt that they give more light to the earth then all the reſt do, *&c.* The Scripture then, and our owne ſenſes aſſure us that theſe are the great lights. If you ſay that each ſtarre is a bigger light in it ſelfe then the Moon, I will beleeve it when I ſee it; or have talked with one of your world in the Moon, who perhaps can informe us better, then any reaſon you can bring to evince us.

De Geneſ. ad litter. l. 2. cap. 16.

2. Wee grant that *Moſes* tells us of *waters above the firmament*, but we deny that this is in reference to an erroneous conceit (as you ſay) but rather wee hold, That it is an erroneous conceit to forſake

ſake the true fountaines of knowledge, to digge crackt ciſternes; to preferre any opinion to the plaine text of Scripture. What a forced expoſition is it, to call clouds and raine below in the aire, and which are oftentimes lower then the tops of hills, to call theſe I ſay, *waters above the heaven*, of which the Pſalmiſt ſpeaks; whereas theſe waters are ſo farre below the heaven? And how can any conceive, that the ſecond day there was raine below in the aire, and that God by the Firmament did ſeparate that raine from the waters of the ſea? And though I ſhould yeeld that the aire is called heaven ſom'time Synecdochically; and that raine or clouds being in the aire, may be ſaid to be in heaven: yet I cannot yeeld, that therefore they are above the heaven, for to be above, and to be in, differ much: therefore I hold with the ancient Doctors of the Church, That there be waters above the heaven, which is no more incredible (ſaith St. *Auſtine*) that there may be waters in the upper part of the great world, then that there may be waters in a mans head, which is the upper part of the little world. If wee look (ſaith St. *Ambroſe*) 1. On the greatneſſe and omnipotency of God in creating the world. 2. On his ordinary power in preſerving the world, ſuſtaining all things by the word of his might, by which he holds up the ſea that it may not drown the low land. 3. On his miraculous power in cauſing the waters of the Red-ſea to ſtand upon an heap, and *Jordan* to goe back: which miracle he made viſible, that thou mayſt beleeve theſe things which are inviſible; then why ſhould wee doubt of theſe waters which be above the heavens? If any aske mee what is the nature, uſe, or end of thoſe waters, and how they are there; St. *Auſtine* ſhall anſwer for me: *Quomodo, aut quales ibi aquæ ſint, &c.* how, or what kind of waters theſe be, is uncertain; but that there be waters there wee doubt not, becauſe greater is the authority of this Scripture, then the capacity of all humane wit.

Pſal. 148. *De civitat. l.* 11. *cap.* 34. *Hexam. l.* 2. *cap.* 3. *De Gen. ad lit. l.* 2. *cap.* 6. *Gen.* 1. 5.

3. When the Scripture ſpeaks of innumerable ſtarres, you ſay, *that is to be underſtood according to the vulgar opinion*: but I ſay, that it is the opinion of the beſt Learned, that they cannot be numbred, even *Clavius*, whom you cite for you, confeſſeth, That though Aſtronomers have reduced the moſt conſpicuous ſtarres to the number of 1022. yet that there are multitudes of ſtarres, beſides theſe, that cannot be told, *Hoc nunquam negabo*, (ſaith hee) I will never deny this: and hee ſaith alſo, That God ſo enlarged *Abraham*'s ſight, that hee made him ſee all the ſtarres of heaven. If then you

Pſal. 147. 4. *Jer.* 33. 22. *Iſa.* 1. *ſphæ.*

looke in a cleare winters night towards the North; if you look on the milkie way, if you conſider the Stars towards the South pole, not diſcernable by us; you muſt confeſſe that the Scripture ſpeakes properly, and not according to vulgar opinion, when it ſaith, That *the Starres are innumerable*: therefore ſaith Saint *Auſtin*, Whoſoever brags that he hath comprehended and ſet down the whole number of the Starres, as *Aratus* and *Eudoxus* did; *Eos libri hujus contemnit authoritas*; the authority of Scripture contemnes them. But when you tell us, That *the Iſraelites did farre exceed the number of the Starres*; that is nothing to our purpoſe: beſides wee can eaſily anſwer, that God did not compare *Abrahams* carnall ſeed to the Starres, but his ſpirituall ſeed. His carnall ſeed is compared to the ſand and duſt; and ſo writes Saint *Auſtin*. Againe, when you have found out the true number of all the Starres, then tell us, whether they or *Abrahams* ſeed be greateſt in number.

De civit. Dei l. 16. c. 23.

Auguſt. ibid.

4. *You prove that the holy Ghoſt ſpeakes not exactly of naturall ſecrets; for he ſets not downe the exact meaſure or proportion of* Solomons *braſen ſea. Anſw.* I had thought that a braſen veſſell had been the worke of art, and not a ſecret of nature: that Geometricall proportions are ſecrets of nature, is a maxime onely in your Philoſophie. 2. I had ſaid that *Joſephus* held this ſea not to be perfectly round; You reply, *That then the diſproportion will be greater, and that Scripture which calls it round, is to be beleeved before Joſephus.* I anſwer, that I alledged not *Joſephus* to preferre him in my beliefe to the Scripture, but to ſhew that there could not be an exact proportion, betweene the diameter and the circumference, in a veſſell not exactly round; and yet the Scripture doth not ſay, it was exactly round, but onely round. Every thing that is called round is not of an exact round figure; an egge is called round; *The Rainbow is ſaid to be round about the Throne. And the hills to be round about Jeruſalem. And children to ſit round about the table &c.* Which you will not ſay are to be underſtood of an exact round figure. But indeed I know not how to pleaſe you; if I alledge Scripture, you anſwer, that Scripture ſpeakes not exactly of naturall ſecrets; that it accommodates it ſelfe to the errours of our conceits; that it ſpeaks according to the opinion of the vulgar, &c. If I alledge *Joſephus* or any other Author, then you tell us, that Scripture is to be beleeved before *Joſephus*; ſo that you are more ſlippery then any eele. 3. I had ſaid, that the Scripture for brevities ſake in numbering, uſed onely to mention the greater number, and to omit the leſſer; as *Jacobs* family

Rev. 4. Pſal. 125.

mily were ſeaventy ſoules, which indeede were ſeaventy five; and many other ſuch paſſages I alledged. You anſwer, that this confirmes your Argument; *For the Scripture is ſo farre from ſpeaking exactly of Philoſophicall ſecrets, that in ordinary numbering, it doth conform to common cuſtome. Anſw.* 1. Shew us that this kinde of numbering, was the common cuſtome. 2. Will it follow: The Scripture doth not exactly number, ſometimes for brevities ſake; *ergo*, it never ſpeakes exactly of Philoſophicall points? 3. If this conſequence be good, then it will follow, that you never ſpeake exactly of Philoſophicall points: for you ſometimes in mentioning of numbers, omit the leſſer number; as when you ſay ſeaventy Interpreters, whereas there were ſeaventy two. Laſtly, I anſwer, that there is great odds betweene an hiſtoricall narration of the meaſure of a veſſell, as it was taken by the work-men, who are not ſtill exact Geometricians: and a plaine and conſtant affirmation of a Philoſophicall truth. He that wrote the Bookes of the *Kings*, ſets down the circumference of the braſen ſea to be thirty cubites, and the diameter to bee ten; for ſo doubtleſſe the meaſure was taken by the work-men: but when the Scripture ſaith, *The earth is immoveable*; it records this as a Philoſophicall or Theological maxime; and not as an hiſtoricall paſſage. Concerning the ends and ſides of the earth, and of heaven we will ſpeake anon.

5. That the earth is founded on the waters, is not the opinion of common people, but rather the contrary; for they are led by ſenſe as you uſe to ſay: and their ſenſe ſhewes them, that the ſeas are above the earth; and reaſon will teach them, That a lighter body cannot be the foundation of a heavier. But you bring a ridiculous reaſon, why ſome thinke the earth to be upon the water: *Becauſe when they have travelled as farre as they can, they are ſtopped by the ſea:* By the ſame reaſon, if you were travelling and ſtopt by a river, or lake; you will conclude that the earth is upon that river or lake. But your opinion is true in ſome ſenſe; for when we are ſtopt by the ſea, lake or river, we get up into a boate or ſhip, and then indeed earth is above water: but I thinke you was aſleep when this watriſh reaſon dropt from your pen. I have already ſhewed how the earth is ſaid to be upon the ſea; that is, (by the Hebrew phraſe which wants comparatives) that it is higher then the ſea; and that it is in ſome parts of it above the ſeas, flouds, and rivers, that are in the concavities of the earth. *Cant. Lanſberg. l. 1. ſect. 1. c. 9.*

6. You ſpeake much of the right and left ſide of Heaven, and

dextro

dextro Mercurio; you have conveyed a great part of your diſcourſe out of *Clavius*, without acknowledgement: but *quorſum pertinet hæc?* This waſte of words might have been better ſpared, as being impertinent. For that place of *Job* ſpeakes indeed of the right and
Job 23.8,9. left hand, but not a word of heaven: neither is there any right or left ſide in heaven, nor needs there to be. For the left ſide is more imperfect and weak then the right, which cannot be ſaid of heaven, being an uniforme, and every way perfect body. And how can there be a right and left ſide, where there is neither ſenſe nor life, nor diſtinction of organicall parts? Therefore, in trees and plants, there is no right or left ſide, though they have life; much leſſe can this be
2. in heaven. 2. Tell us what part of heaven doth the Scripture call
3. right or left? this I know you cannot tell. 3. Though the Scripture ſhould ſpeak after the vulgar phraſe, in naming the right and left ſide of heaven: doth it therefore follow, that the Scripture
4. ſpeaketh ſo concerning the ſtability of the earth? 4. Whereas you ſay, *That* Ariſtotles *opinion in this point is delivered upon wrong grounds, ſuppoſing the Orbes to be living creatures, and aſſiſted with Intelligences*: I confeſſe that he calls the heaven ἔμψυχον, as having a ſoule or ſpirit, which he calls Intelligence, we Angel, by which the heaven is moved: but he doth not hereby ſuppoſe the heaven to be a living creature; for the Angels are not informing formes of their Orbes, but aſſiſting. When the Angel was in the poole of Bethesda, and moved the water, you will not inferre upon this, that the poole was a living creature: whatſoever is ἔμψυχον, *animatum*, that is, hath a ſoule or ſpirit in it; is not therefore a living creature: for ſo you may ſay a paire of bellowes, or winde inſtruments of muſicke, are living creatures; for winde, breath and aire, are called ſometimes ſoules: ψυχὴ or *anima*, or *animus*, is common to them all. *Quicquid ignes, animæque valent: Phrygias audire animas*, are ſpoken of bellowes, and muſicall inſtruments; ſo, *Phrygius cornus liquida canit anima*: And yet I will not deny, but metonymically, heaven may be called a living creature; as being that which giveth life to living creatures: or by Analogie, it may be ſaid to live, in reſpect of the Angel which ſupplies the roome of a ſoule, not in
5. giving life, but, motion to it. 5. It was no wrong ground in *Ariſtotle* to ſay, that the heavens were aſſiſted with Intelligences, ſeeing they cannot move themſelves being ſimple ſubſtances; neither can a naturall forme give ſuch multiplicitie of motions, as are in the heavens; neither are they moved by other bodies; for theſe bodies

dies at laſt muſt be moved by ſpirits; neither doe naturall bodies move naturally in their place, but, to their place: now the heavens are in their place. Of this opinion were not onely the Philoſophers, but alſo the Chriſtian Doctors: heavenly bodies are moved by the miniſtery of Angels, ſaith Saint *Auſtin. Origen* ſaith, that the Angels have the charge of all things, of earth, and water, aire, and fire: and perhaps Saint *Hierome* miſtooke his meaning, when he attributes to *Origen* this errour, of aſſiſting reaſonable ſoules to the heavens; he meant the Angels. And *Thomas, by that Spirit, that compaſſeth the world by its motion, Eccleſ.* 1. 6. underſtandeth an Angel. It were ſtrange to thinke that ſo many Angels ſhould be aſſigned by God for the earth; and for inferiour officers towards men, and none ſhould have the moving of the heavens: but of the Angels moving their ſpheares, I have ſpoken already againſt Mr. *Carpenter*.

De cognit. ver. vitæ c. 6

Hom. 8. *in Jerem. Epiſt.* 59. *ad Ariam. Sect.* 1. *c.* 6. *Sect.* 2. *c.* 1, 4, 5.

7. *The Spirit* (you ſay) *applies himſelfe to the common tenent generally received heretofore, in attributing wiſdome and underſtanding to the heart; whereas reaſon and diſcurſive faculties, have the chiefe reſidence in the head.* *Anſw.* 1. How know you that this was the generall tenent in *Solomons* dayes? From what ſtories of theſe times have you had this? The word (*heretofore*) muſt ſignifie the time before *Solomon*: I doubt me, if you ſhould be put to it, you could not prove that the opinion of the underſtandings reſidence in the heart, was the common tenent in the world before *Solomon*; but I perceive you would have it to be ſo, becauſe *Solomon* placeth underſtanding in the heart: as if the Scripture ſet downe no poſitive Doctrines, but what were common tenents, whether true or falſe. 2. The word (*heart*) here may ſignifie the ſoule or minde; as it doth often in Scripture, and in humane writings too; the ſoule is called heart, and the heart is called ſoule oftentimes. So in *Homer*, ἄλγεσι θυμὸν ἔδοντες, eating their ſoules, that is, their hearts with cares. And in *Plutarch*, καρδίαν μὴ ἔχειν, is to be without reaſon or underſtanding: *vecordes* and *excordes*, are men whoſe minds are diſtempered. So in Saint *Peter*, *By the hidden man of the heart*, is meant, the renovation of the minde. If then by the heart is underſtood the mind or ſoule, you muſt needs grant, that it is a tenent no leſſe true then common, that the underſtanding is in the heart, whether you take it for a part, or for a power, or for a facultie of the ſoule. 3. This was not a common tenent many yeares after *Solomon*; for neither *Empedocles*, nor the Epicures, nor the Egyptian Philoſophers, nor the Arabians, nor the Academicks, held the un-

Prov. 8. 5. 10. 8. *Eccleſ.* 1. 13, 16, 17. & 8. 5.

2.

Odyſſ. 1.

1 Pet. 3. 4.

3.

derſtanding to be in the heart; but ſome in the head, ſome in the breaſt, ſome in all the body. *Herodotus* affirmed it to be in the ears; *Blemor* in the eyes; *Strato* in the eye-browes: onely the Peripatetickes and Stoicks, placed it in the heart. 4. The holy Ghoſt attributes underſtanding to the heart; not becauſe it was a common, but becauſe a true tenent: for howſoever *Galen* and his Sectaries hold the contrary, yet it is certaine, that the heart is the true ſeat of the underſtanding. For 1. The will is in the heart, therefore the underſtanding is there alſo; ſuch is the dependency of theſe two faculties, the one from the other, that the will is never without the underſtanding; and indeed theſe two are but one in eſſence; for the will is nothing elſe, but the underſtanding dilated, extended, inlarged to the deſire and fruition of that object which it apprehends. 2. The Apoſtle ſaith, *That we beleeve with the heart*, (except you will have this alſo to be ſpoken according to opinion, and not according to truth) but without underſtanding, we cannot beleeve; *For to beleeve* (ſaith *Thomas*) *is the act of underſtanding, moved by the will to aſſent.* 3. The heart is the originall ſubject of ſenſe and motion, and conſequently of underſtanding; which cannot be in us without ſenſe and motion. 4. Underſtanding is in the ſoule, the ſoule in the ſpirits, the ſpirits in the blond, and the bloud is originally in the heart; which though it be in the liver as in a ciſterne, and in the veines as conduit-pipes, yet it is in the heart, as in the fountaine. 5. The animall ſpirits in the braine, in which they ſay the underſtanding is, are both generated of, and preſerved by the vitall ſpirits of the heart, being conveyed thither by certaine arteries, ſmall ſtrings, or fibræ. 6. In a ſudden feare, which is the paſſion of the heart, the underſtanding is much darkened and diſturbed. 7. *Hippocrates* every way a better man then *Galen* affirmes this truth: γνωμὴ ἡ τοῦ ἀνθρώπου πέφυκεν ἐν τῇ λαιῇ κοιλίῃ: *Mens*, minde or underſtanding is in the left ventricle of the heart. That Booke, *De morbo ſacro*, which goeth under the name of *Hippocrates*, which contradicteth this truth, is juſtly affirmed by *Galen* to be none of his. 8. Though I ſhould yeeld to the *Galeniſts*, that the underſtanding is in the braine; yet I will yeeld that it is there onely inſtrumentally and ſecondarily, and in reſpect of its act or exerciſe; for originally, principally, and in reſpect of its faculty, it is in the heart onely: neither would there be any exerciſe of underſtanding in the braine, if it were not from the influence which it receiveth from the heart. Neither is this ſtrange, that the act ſhould be in one part, and

Secund. Sec. q.4.artic.2.

Oportet intelligentem ſpeculari phantaſmata. Ariſt.

Lib. de corde.

and the faculty in another; for the faculty of ſeeing is in the brain, and yet the act of ſeeing is in the eye: ſo that though the eye were loſt, yet the faculty would remaine ſtill in the braine. As for any thing that the *Galeniſts* can ſay againſt this, it is of no moment; for although the braine be hurt, wounded, or inflamed, yet the faculty of underſtanding is not loſt, though the act or exerciſe be hindered. Beſides, there is a phrenſie or alienation of the minde, upon a hurt or inflamation of the Diaphragma, as well as of the braine; therefore, the ancient Phyſicians called this muſcule, φρὴν, becauſe it being hurt, the minde was hurt: the remedies applied to the head by which the braine is cured, doe not argue that the underſtanding is there; but that there it doth exerciſe it ſelfe: and yet remedies are applied ſometimes to thoſe parts where the diſeaſe is not, but in ſome other place; but this I leave to Phyſicians. I remember that *Philo* will have the underſtanding which he compares to a King, to be in the head; becauſe there be all the ſenſes, as the Kings guard: but he is deceived, for the guard may be in the ſame houſe with the King, bnt not in his bed-chamber. The guard or outward ſenſes are in the outward court, the inward ſenſes are in the privy chamber, but the King himſelfe is in the heart, as in his bed-chamber. If any reply that the head is uppermoſt, and therefore the worthieſt part of the body, and fitteſt for the King to be there; I anſwer no; for the garret or upper part of the houſe is for the ſervants to lodge in; the King ought to be in the moſt inward and ſafeſt part of his palace. It is evident then by what we have ſaid, that the holy Ghoſt by placing the underſtanding in the heart, did ſpeake according to truth, and not to common opinion; and therefore to write that the ſpirit of truth who leadeth us into all truth, ſpeaketh rather according to opinion then truth; is a note blacker then your inke, unfit to fall from the pen of a Chriſtian. For even allegories, tropes, figures and parables, are truths: but I impute this ſlip rather to negligence in you, then malice.

8. The vipers egges will not help you: *Ova aſpidum ruperunt*, they have broken the vipers egges, as you tranſlate it: but 1. The viper hath no egges; for whereas other Serpents lay egges, the viper excludeth young vipers and not egges: therefore called *vipera, quaſi vivipara:* Vipers egges are ſuch chimera's, as your world in the Moone. 2. The aſpis and the viper are of different kinds; to ſay that aſpis is a viper, is as true, as if you did ſay, a cat is a pig, or a crow is a gooſe. Read *Ælian*, *Pliny*, and others who have written *Eſay* 59. 5.

2.

the ſtories of theſe creatures, and Phyſicians who make treakle of vipers, not of aſpes; if you will not beleeve me. It was a viper, not an aſpe, that leaped upon Saint *Pauls* hand: they were aſpes, not vipers, that *Cleopatra* applied to her breaſts. 3. *This Scripture doth not allude to that common fabulous ſtory of the viper, as you ſay, breaking his paſſage through the females bowels:* but it compares the couuſels and plots of wicked men to the egs of the aſpes, which being white and faire to the eye, are venomous within, and cannot be broken without the indangering and poyſoning of him that breakes them: ſo wicked mens ſmooth counſels and plots, howſoever ſpecious in their pretences, are notwithſtanding venemous and deadly in their intentions and execution. 4. Though I ſhould grant you that vipers have egges, yet it is one thing for men to breake vipers egges, and another thing for young vipers to breake through the bowels of the female; the Scripture ſpeaketh of the former breaking, and not of the latter; neither hath it any relation at all in this place to that ſtory of the vipers breaking through the belly of the female.

5. Nor is this ſtory ſo fabulous as you take it, having the patrocinie of ſo many great and grave Authors for it; namely, *Ariſtotle, Theophraſtus, Herodotus, Ælian, Plutarch, Horapollus, Pliny*, Saint *Baſil*, Saint *Hiereme, Iſiodor*, and divers others. *Scaliger* indeed writes, that he ſaw a viper bring forth her young ones without hurt; and perhaps *Angelus, Brodæus*, and ſome others have ſeen the like: but what though we have ſeen ſome unhurt? it is a hard skirmiſh where none ſcapes. To inferre that no vipers are killed by their young ones, becauſe ſome are not, is as much as if you would ſay, no women are ſicke or pained in their childe-birth, becauſe ſome are not. Thus you ſee that you can make no treakle or antidote of your viper for the ſtrengthening of your opinion; the very names which are given by the Greekes and Latines to this creature, ſhew that this is no fiction; for ἔχιδνα *quaſi* ἔχουσα ὠδῖνας, having much paine in bringing forth; and *vipera, quaſi vi parions.* But we will ſhake off this viper from our pen, as Saint *Paul* did that viper in Malta from his hand; and if your viper hath bit us, let us ſee if your aſpe (for ſo naturaliſts doe write) will cure us.

Exercit. 101

9. *The aſpe* (which you tranſlate the adder) *ſtops his eares,* (ſaith the Pſalmiſt) *againſt the voyce of the charmer. This you ſay is fabulous, if we may beleeve many naturaliſts, yet the holy Ghoſt alludes to it becauſe it was the generall opinion of thoſe dayes. Anſw.* You are a great Antiquary, for you know the common opinions that were in *Davids* dayes,

Pſa. 58. 4, 5.

dayes, and you tell us not out of what records or manuſcripts you have this; but indeed I will not beleeve you, nor your many naturaliſts, whom you ſhould have named, and ſhewed us their reaſons, why they think this to be fabulous. 2. You will not (I think) hold inchanting of Serpents to be fabulous, except you will (as you uſe to doe) contradict both ſacred and profane, ancient and recent ſtories. 3. Nor will you deny that there is great cunning and prudence in Serpents to avoid dangers, and to preſerve themſelves; our Saviour will have us to learne wiſdome of them; why then may not the aſpe naturally have this piece of policie to ſtop his eare? 4. Though there were no ſuch naturall policie in the Serpent, yet may he not be taught by inchanters to do ſo? You ſhal read in ſtories of ſtranger matters done by Serpents; if you will reade *Irenæus*, *Auſtin* and *Epiphanius* of hereſies, you ſhall finde how that ſect of the Valentinians or Gnoſtickes called (from worſhipping of the Serpents) Ophits, did teame and teach their Serpents to come out of their holes or boxes where they were kept, to crawle on their altars; eo licke their oblations, to wrap themſelves about their euchariſt, and ſo returne to their holes: the like is recorded by *Virgil* of a Serpent on the altar which *Æneas* erected on his fathers tombe:

Tandem inter pateras & levia pocula Serpens, *Æn.5.*
Lubavitque dapes, &c.

I will not ſpeake of *Olympias* her Serpent, and of many others. 5. May not Satan who hath ſtill abuſed the Serpent to ſuperſtition, cauſe the aſpe ſtop his eares when he is inchanted? Is it a more incredible thing for an aſpe to ſtop his eare, then for a Serpent to ſpeake and diſcourſe, as he did to *Eva*. I could tell you ſtrange ſtories of the Serpent *Epidaurius* at Rome; of that Serpent that barked at the ejection of *Tarquinius*, and of others recorded by grave Hiſtorians, which I will not account fabulous, though you perhaps will; becauſe I know that Satan by permiſſion can doe ſtrange things. 6. It is manifeſt that beaſts, birds, and fiſhes, are diverſly affected, with joy, fear, courage, anger, &c. according to the qualitie of the ſound which they heare: why then ſhould the relation of the aſpe ſtopping his eare be accounted ſo incredible? It may be as naturall for him to ſtop his eare at an ungratefull ſound, as for other creatures to run away from it. 7. Though men have but ſmall knowledge of this, yet (as S^t. *Auſtin* ſaith) the Spirit of God knowes better then all men do; who had not recorded this had it not been true;

2. 3. 4. 5. 6. 7. *In Pſal. 57. & 67.*

true; ſo that what is by men accounted an opinion, in Scripture it is truth, ſaith the ſame Father: by all this you may ſee that the holy Ghoſt ſpeaketh not according to mens opinions, but according to truth; and though you ſhould erect your two Serpents over your dore, as the Gentiles uſed to doe over their temples, yet they will not priviledge your opinion.

Pinge duos angues.

10. *The North winde which the Scripture calleth cold and drie, the South winde which is hot and moiſt, are phraſes as you ſay which doe not containe any abſolute generall truth: for though the North-winde to us on this ſide of the line be cold and dry, yet to thoſe beyond the other tropicke it is hot and moiſt.* *Anſw.* There is no abſolute generall truth in moſt of the ſublunarie works of nature, for they are ſubject to much change; and eſpecially the windes which are the emblemes of unconſtancy. So that even here in this Iſland I have known northern windes warme and moiſt, and ſoutherne cold and dry; and if you read *Acoſta* he will tell you, that ordinarily beyond the line, the North-winde is cold and dry, as it is in this ſide; and not hot and moiſt (as you ſay) though it blow from the line. The windes doe vary according to the climate they blow through, and yet they keep not the ſame tenure ſtill in the ſame climate: the North-winde is ordinarily cold and dry in that climate, where theſe Scriptures of *Job* and *Proverbs* were penned; and the Scripture ſpeaketh onely of that climate: and yet if you will beleeve *Acoſta's* owne experience, theſe Scriptures are true alſo of the North-winde beyond the line. But what will you inferre upon this? marry that this propoſition, the earth is immoveable, containes not a generall truth, becauſe the North-winde is not generally cold and drie; as if you would ſay, this propoſition, the ſea ebbes and flowes, containes not a generall truth; *ergo*, this propoſition, man is a reaſonable creature, is not generally true; who will not laugh *petulanti ſplene*, to heare ſuch Logick? But you give a reaſon why this phraſe of the coldneſſe and drineſſe of the North-winde is not generally true, becauſe in ſome places it is hot and moiſt: prove unto us that the earth in ſome places moves circularly, and then we will yeeld that this phraſe of the earths immobility is not generally true. 2. Theſe Scriptures which you alledge for the coldneſſe of the North-wind may be diverſly underſtood: for *Job* 37.9. there is mention made of diſperſers or ſcatterers, but not of the North-wind: and this quality is in every wind to diſperſe the clouds, as well as to bring them. In the *Pro.* 25. 23. it is ſaid, that *the North-winde bringeth forth raine*; for ſo the Hebrew

Hiſtor. Indicar. l. 3. c. 3.

Job 37.9. & 22. 17. *Pro.* 25.29.

brew word תּוּחַל ſignifieth, as well as to drive away; and ſo *Junius* and *Tremelius* tranſlate it, *gignit*; and in ſtead of *Aquilo*, they have *Cecias*, which is the North-Eaſt-winde, though ſome think it to be the North-Weſt: ſo the ſeaventy Tranſlatours have ἐξεγείρει to excite and ſtirre up: ſo *Job* 37. 21. where ſome tranſlate, faire weather; in Hebrew, Greeke, and in the old Latine Tranſlation, it is, *Gold cometh out of the North.* Thus upon tottering and uncertaine foundations, you raiſe the ſtructure of your wilde phantaſies.

11. The darkning of the Sunne, the turning of the Moone into bloud, and the falling of the Stars will not help you; for theſe are not naturall effects, but miraculous workes of God to be done afore Chriſts ſecond coming: and to ſay that theſe things ſhall be but in ſhew or appearance, is to make us thinke that God will affright the world, as we doe little children with hobgoblins. How will the truth of his miracles, the terrour of his judgements, the greatneſſe of his majeſtie be ſeene, if theſe things ſhall not truely and really be effected? you may as well ſay, that all former miracles were but in ſhew or appearance: as Chriſts turning of water into wine; his walking on the Sea; his raiſing of the dead; curing of diſeaſes; appeaſing of the ſtorme, &c. Is it a thing more incredible for the Sun to be miraculouſly darkened at Chriſts ſecond coming, then it was at his paſſion, when the Sun loſt his light, the Moone being at full? Which miracle was acknowledged by that learned Areopagite, being then in Egypt. Or is it more incredible that the Moone ſhall be turned into bloud, then for clouds to raine bloud? of which bloudy ſhowers, you may read in the Roman and French ſtories, and in our owne Chronicles at home, of bloud that rained ſeaven dayes together in this Iſland, ſo that the milke was turned into bloud. What ſay you of all the waters of Egypt which were turned into bloud? and if wee may beleeve the Church ſtories, when *Felix* the Martyr ſuffered, for not delivering up the Bible to be burned, about the yeare of Chriſt, 302. the Moone was turned into bloud: thus God is able to make your world in the Moone Aceldama. And why ſhall we not as well beleeve that the Starres ſhall fall, as that they fought againſt *Siſera*, or that a new Starre conducted the Wiſe-men to Chriſt? God is as able to ſhake the Heavens, and the Stars from them, as a winde is to ſhake a fig-tree and ſpoile it of leaves: he that ſetled the Stars may remove them. And to tell us that theſe Meteors which wee

call

call falling Stars, are meant; is a chil diſh conceit, ſeeing ſuch doe fall almoſt every night, and are the meer works of nature, no wayes fit to expreſſe Gods judgements, and the terrour of that day.

John 3. 8. 12. Chriſt ſaith to *Nicodemus, that he knew not whence the winde cometh, nor whither it goeth. You inferre that none knows this as the vulgar thinke; and therefore this, and ſuch like phraſes are to be underſtood in relation to their ignorance; and the Scripture* (you ſay) *ſpeaks of ſome naturall effects, as if their cauſes were not to be found out, becauſe they were generally ſo eſteemed by the vulgar.* I perceive you are none of the vulgar, but, *de meliore luto*; for it ſeemes you know theſe cauſes which the vulgar know not: you are *gallinæ filius albæ*; a happy man that knowes the hid cauiſes of things:

Fœlix qui poteris rerum cognoſcere cauſas.

I confeſſe my ignorance in the moſt of theſe naturall cauſes; Philoſophers reaſons are not ſatisfactory to me:

Obſtat cui gelidus circum præcordia ſanguis.

But if the wiſer ſort know from whence the winde commeth, which the vulgar doe not; ſo likewiſe muſt the wayes of the Spirit in our regeneration be known to them alſo, though not to the vulgar: but ſure that is not Chriſts meaning; for he meanes that the way and manner of our regeneration are as hid & ſecret to men without divine revelation, as the wayes of the winde are: and as none knows the one, ſo none the other. 2. If you know from whence the winde cometh, and whither it goeth, I pray tell us, and hide not your light under a buſhell: perhaps you will ſay that it cometh from North, or South, Eaſt, or Weſt; if you can ſay no more, you were as good lay your finger on your lip with *Harpocrates*, and ſay nothing. For tell us, out of what part of the earth or ſea doth the North-winde ariſe, when it blowes over our Iſland; and how farre doth it goe, or where doth it end? Whence came the great South-Weſt-winde, which the 27. of *December* laſt ſunke ſo many ſhips, overturned ſo many trees, overthrew ſo many barnes and dwelling houſes? and where did this winde end? Can you tell us whence the Briſes or trade-windes under the line which blow continually from Eaſt to Weſt, doe proceed? or doe you know whence the Aniverſarie windes in Egypt, called *Eteſiæ*, doe come? Theſe begin to blow when the dog-ſtarre ariſeth, and continue forty dayes together; ſuch windes blow in Spaine and Aſia, but from the Eaſt; in *Pontus* from the North. I thinke that though you ſhonld aske of the Finlanders who uſed to ſell windes, (if you will beleeve *Olaus*) they

they cannot informe you. 3. How can Philoſophers tell us from whence the winde cometh, when they know not as yet what the winde is, whether an exhalation, or the aire moved, whether it ariſeth out of the ſea, as *Homer* thinks, or out of the bowells and caves of the earth, as others ſuppoſe. *Pliny* will tell you of Caves where the winde blowes continually; and *Neptune*, in *Virgil*, will ſhew you, that *Æolus* hath no power in his kingdome, but in the hollow caves and rockes of the earth:

——*tenet ille immania ſaxa,*
——*Illâ ſe jactet in aulâ*
Æolus & cæco, &c.——

4. St. *Auſtine* was no vulgar man, and yet hee confeſſeth his ignorance, that he knowes not out of what treaſure God bringeth forth his windes, and his clouds; indeed wee may all acknowledge with *Seneca*. that our knowledge is but ignorance; and becauſe of the uncertainty of humane conjectures, it is beſt to content our ſelves with the knowledge of that ſupreme cauſe of all naturall effects revealed to us in Scripture. *In Pſal.* 134

13. *Solomon* (you ſay) *doth onely mention the ſea being obvious, and eaſily apprehended by the vulgar, to be the cauſe of ſprings and rivers, though in nature there be many other cauſes of them.* I anſwer, *Solomon* doth mention the ſea onely, not becauſe the vulgar apprehends it ſo, but becauſe indeed and verily it is ſo; to wit, the onely prime cauſe of ſprings and rivers: if you ſhould tell mee that raine and vapours are other cauſes, you would ſay nothing, for theſe are ſubordinate to the ſea; hee that names the prime and ſuperiour cauſe of any effect, doth not exclude, but include all ſubordinate and inferiour cauſes. If, I ſay, the ſea is the cauſe of ſprings, I ſay inclusively, that raine and vapours (which have their originall from the ſea) are the cauſes alſo. When the Jewes ſaid they were the ſons of *Abraham*, they excluded not *Iſaac* and *Jacob*. When Saint *Paul* ſaith that God giveth to every ſeed its body, hee excludes not the Sun, Raine, Earth, and the formative power of the ſeed, which are ſubordinate cauſes to God. 2. *Solomons* drift was not to make a Philoſophicall diſcourſe about the cauſes of rivers, but to ſhew the vanity of things by the continuall iſſuing and returning of rivers from and to the ſea, as hee had done before by the Sunnes motion. *Eccleſ.* 1. 7. 1 *Cor.* 15.

14. For the thunder, which *David* calls the voice of God; wee ſay that this phraſe is not to be underſtood with relation to ſome

mens ignorance, as you fondly conceit, but to Gods omnipotency and providence; who by his thunder, as by a voice, ſpeaks unto the world: and a powerfull voice it is to ſhake the hearts of the proudeſt Atheiſts, even of *Caligula* himſelfe; and to teach the moſt perverſe Epicures, that there is a God in heaven, who ruleth and judgeth the earth. No eloquence prevailed ſo much with *Horace* as this, when hee was *parcus Deorum cultor*, an Epicure: it made him renounce his errour, —— *& retro vela dare*; by which the Gentiles acknowledged there was a ſupreme God, whom they called *Jupiter*, and that hee had the power of thunder,

Lib. 1. Od. 34.

——*qui fulmine concutit orbem.*
—— *qui fœdera fulmine ſancit.*

So the ſame *Virgil* acknowledgeth that the thunder made the people to ſtand in awe of God:

——*ante Genitor cum fulmina torques,*
Nec quicquam horremus, &c.

Æn. 4.

By this, God moved the hearts of the Romanes to uſe the Chriſtians kindly, when by thunder hee overthrew the Marcomans; and the Chriſtian Legion from thence was called, The thundering Legion. It is his weapon with which hee fights againſt wicked men, and which hee ſtings ἐπὶ τοὺ ἐπίορκους, againſt perjurers, as *Ariſtophanes* ſaith: all the thundering diſputations of Philoſophers, and the ſmall ſparkes of light or knowledge which they have of naturall cauſes, are but toyes; they are no better then glow-wormes. What is the croaking of frogs, to the cracking of thunder, or the light of rotten wood, to lightning in the aire? Therefore, in ſpight of all Naturaliſts, let us acknowledge with *David*, that it is the Lord that maketh the thunder, that this voice of the Lord breaketh the Cedars, and divideth the flames of fire, and ſhaketh the wilderneſſe, *&c.* Beſides, the thunder is called Gods voice, as the winde Gods breath, by an Hebraiſme: as tall Cedars and high mountaines are called the Cedars and Mountaines of God: the voice of God is as much as if you would ſay, an excellent voice. Then whatſoever Naturaliſts affirme peremptorily of the thunder, I will with *Job* and *David*, acknowledge God to be the onely cauſe; and will aske with *Job*, *The thunder of his power who can underſtand?* *Quis tonitrus ſonum, aut quemadmodum oriatur explicandis rationibus aſſequi poſſit?* ſaith *Symmachus*, on theſe words of *Job*.

Pſal. 29.

Job 26. 14.

15. *The conſtellation called the 7. Starres, are found* (you ſay) *by later diſcoveries, to be but ſix:* What if I ſhould grant you this, and

and more too then you deſire ; to wit, that of old they were accounted but ſix of ſome : So *Ovid*,

Dicuntur ſeptem, ſex tamen eſſe ſolent. *lib 4. Faſt. in Aperin.*

So *Aratus*,

Ἑξ δ᾽ἅμα πᾶσαι ἴσασι μετ᾽ ὀφθαλμὸν ὁρᾶσθαι.

And generally the Poets held, that though *Atlas* had ſeven daughters, called *Atlantides* from him ; yet one of them, to wit, *Merope*, or as others ſay, *Electra*, hides her face : but divers others hold there be ſeven to be ſeen. And S. *Baſil* tells us in plain termes, that there are ſeven ſtars of theſe, and not ſix, as ſome think : but let there be ſeven, or but ſix, what is this to your purpoſe ? Mary, that the Scripture, *Amos* 5. 8. ſpeakes of ſeven ſtarres, according to common opinion, being but ſix in *Galilies* glaſſe ; but indeed the Scripture ſpeaks neither of ſix nor ſeven, but of a certaine conſtellation, which the Seventy Interpreters leave out, as a thing unknown to them. *Symmachus*, and *Theodotion* interprete Πλειάδας the old Latine hath it *Arcturus*, which is a ſtarre in *Bootes* behinde the taile of the great Beare ; in Engliſh we call them **Seven ſtarres**, and to mine eyes they ſeem to be ſo many : But if in *Galilies* glaſſe there be but ſix ; it's no wonder, for you tell us elſewhere, That the better the glaſſe is, the leſſe will the ſtarres appeare. It is not like then, that ſo ſmall a ſtarre can be ſeen through it : Let therefore the number of 7. remaine, it is a ſacred number ;

In Caten. Comitoli in Job 9.

——*numero Deus impare gaudet.*

CHAPT. IIII.

1. *Many Philoſophicall points are handled in Scripture.* 2. *The heavens how round in the opinion of the Fathers.* 3. *We muſt have a reverend eſteem of the Fathers.* 4. *How the ſeas not ever flowing the land may be eſteemed a miracle.* 5. *The works of Nature may be called miracles.*

HEre you tell us of *Learned men which have fallen into great abſurdities, whilſt they have looked for the grounds of Philoſophy out of Scripture, which you ſhew by the Jewiſh Rabbines, and ſome Chriſtian Doctors.* *Anſ.* As it is vanity to ſeek for all Philoſophicall grounds in the Scripture, ſo it is ſtupidity to ſay there be no Philoſophicall grounds or truths to be found in Scripture : whereas *Moſes*, *Job*, *David*, *Solomon*, and other Penmen of the holy Ghoſt, have divers paſſages of Philoſophy in their writings, as I have ſhewed heretofore of divers conſtellations out of *Job* : and why may not Philoſophicall truths be ſought for out of Scripture, ſeeing Philoſophy

Cont. Lanibe. l. 1. c. 1. 4. 7. Rerum divinarum humanarumq; cognitio.

is the contemplation or knowledge of divine and naturall things; both which are handled in Scripture, divine things principally, naturall things in the second place; that by naturall things we may come to the knowledge of Divinity, and by this to the attainment of eternall felicity. Therefore in Scripture is recorded the creation, the cause, qualities, and effects of the creature, that by these we may come to the knowledge of the Creator. If the Gentile Philosophers had not found much Philosophy in Scripture, they had never conveighed so much out of it, (as they did) into their Philosophicall books, as *Theodore* sheweth. The idle opinions of many Philosophers, which are grounded neither on sense, nor reason, (as yours of the Earth's motion) are not to be sought for in Scripture, but Philosophicall truths which are grounded on either, or both, may be sought and found there: and whatsoever idle conceits the Jewes have had of Scripture, or their idle fables which they have grounded on it, concerne us not: they were a giddy headed people, given over to a reprobate sense, groping at noone day; having their hearts fat, and their eyes blinded, that they may not see: their seeking for Philosophicall truths in Scripture was not the cause of their foolishnesse, (for few or none of them were addicted to the study of Philosophy) but their owne voluntary blindnesse, pride, stubbornnesse, and contempt of Christ the internall and essentiall Word of God, are the causes of their ignorance in the externall Word; so that they (having forsaken the truth) follow lyes. But as for the Christian Doctors, they have not exposed themselves to errours, by adhering to the words of Scripture, but you are fallen into grosse errors by rejecting the words of Scripture: These which you count errours, are truths; as, That the Sun and Moon are the greatest lights, That there are waters above the firmament, That the starres are innumerable, as wee have already shewed. As for the roundnesse of the heaven, though the Fathers doubt of it, yet they doe not absolutely deny it. *Justine Martyr* doth but aske the question, Whether their opinion may not be true, which hold the roundnesse of the heaven. St. *Ambrose* saith, that it is sufficient for us to know that God hath placed the heaven over us like a vault, and stretched it out like a curtaine or skin. St. *Chrysostome* (whom *Theodoret* and *Theophylact* doe follow) deny the roundnesse of heaven, as it hath relation to our climate or habitation; for so the heaven is indeed, as the Scripture saith, a vault or skin; so that albeit the whole heaven being consi-

Serm. 2. ad Grac. infid.

Resp. ad Qu. 93.

Hexamer. li. 1. cap. 6.

Psal. 104. 2. Isa. 40. 22.

dered

dered with the whole earth, be round, yet being conſidered with reference to parts or climates of the earth, it is not round: Or wee may with St. *Auſtine* ſo underſtand the word [*vault*] or [*curtaine*] or [*skin*] that theſe tearms may ſtand well enough with the roundneſſe of heaven; *ſi ſphæra eſt, undiq; camera eſt*: if it be ſpherical, it is a round vault; *pellis in rotundum ſinum extenditur*, a skin may be made round or ſpherical: for a round bladder (ſaith hee) is a skin; ſo then neither the word vault, skin, canopy, or tabernacle, are words repugnant to the roundneſſe of heaven, neither have you ſuch reaſon to inſult over the Fathers, as if abſolutely and peremptorily they had denyed the roundnes thereof: For S. *Auſtine* ſheweth, that the ſtretching out of heaven like a skin, is mentioned onely to ſhew the power of God, and with what facility hee made the heavens, with more eaſe then wee ſhould extend a skin: and St. *Hierome* ſaith, that the opinion of the earths roundneſſe is the moſt common opinion, agreeing with *Eccleſiaſtes*. So when the Fathers ſay that the earth is founded on the ſeas, *&c.* they doe but follow the Scripture phraſe, which how to be underſtood wee have already ſhewed, and will touch it againe anon.

De Geneſ. ad litter. l. 2. c. 9.

Auguſt. in Pſal. 104.

Hier. c. 3. ad Epheſ.

3. Suppoſe theſe were errours; yet you muſt not take advantage from ſome errours in the Fathers, to leſſen their credit in other things; they were but men, and had not the perfection of knowledge which is in Angels, called therefore *Dæmones* and *Intelligentiæ*. St. *Bernard* ſaw not all things; we ſhould be ſparing in raking into their errours, in uncovering of their ſhame; and like flies, delighting in their ſoares. But yet you cannot obtain your purpoſe in ripping up of their errours; for it will not follow: the Fathers erred in denying the ſpherical figure of the heaven, &c. therefore they erred in denying the motion of the earth: muſt it follow, that becauſe S. *Cyprian* erred in the point of rebaptization, therefore no credit muſt be given to him in affirming Chriſts incarnation? and, I pray, what great error was this in them, to conclude from manifeſt places of Scripture, that the ſeas not overflowing the land is a miracle, and that they are reſtrained by the ſpeciall power of God? I grant that all ſeas are not higher, nor ſo high as ſome lands; but it is manifeſt, that the ſea in ſome places is much higher then the land, as the *Hollanders* and *Zelanders* know; and that their lands are not overwhelmed with the ſea in a ſtorme, is a miracle; and the finger of God is to be ſeen in reſtraining of them: which ſeas, when hee is angry with the inhabitants, hee lets looſe

Job 8. 8. *Prov.* 8. 29. *Jer.* 5. 22. *Pſal.* 104.

ſometimes, to the overthrow of townes and villages:

——Campoſque per omnes,
Cum ſtabulis armenta trahunt ——

In the dayes of *Seſoſtris* King of Egypt, it was by meaſure and obſervation knowne, that the Red-ſea was much higher then the land; but we need not goe ſo farre, the coaſt of our owne Iſland in divers places being lower then the ſea, will prove this to be true; where we may daily ſee Gods power, in curbing the violence of that furious creature:

Du Bartas 3. Day.

—— For the Eternall knowing
The Seas commotive, and unconſtant flowing,
Thus curbed her, and 'gainſt her envious rage,
For ever fenc'd our flowry mantled ſtage:
So that we often ſee thoſe rowling hills,
With roaring noiſe, threatning the neighbours fields;
Through their owne ſpite to ſplit upon the ſhoare,
Foaming for fury that they dare no more.

5. Why then may not this be called a miracle, whereas many ſtrange, yea ordinary effects of nature are called miracles? *Plato* called man the miracle of miracles: and *David* ſaith, *that fearfully and miraculouſly he was made.* Doe not you know that *Diana's* Temple, the Egyptian Pyramides, and the reſt of thoſe ſtupendious buildings, were called the ſeven miracles of the world? not only Gods extraordinary works above nature, but alſo his ordinary works in nature, are miracles, though they be not ſo accounted (ſaith Saint *Auſtin*) becauſe we are ſo uſed to them. For as it was a miracle to turn water into wine in Cana of Galilee, ſo (he ſaith) that miracle is ſeene daily: for who drawes the moiſture or water from the earth by the root into the grape, and makes wine, but God? That Gods finger is to be ſeen in every worke of nature, the Poet doth acknowledge:

Θαῦμα θαυμάτων. Barbara Pyramidum ſileat miracula Memphis Martial.

Perſeverantia conſuetudinis amiſit admirationem. De Trin. l. 3. c. 2. c. 5. & c. 6.

Virgil. l. 4. Geor.

——Deum namque ire per omnes Terraſque tractuſq́, maris, cœlumq́, profundum. A miracle is ſo called becauſe it excites admiration; and doe we not admire Gods power in earth-quakes, prodigious births, thunders, lightnings, and in the Eclipſes of the great Luminaries? therefore Saint *Auſtin* checks the vanity of Philoſophers who went no higher in the contemplation of theſe naturall effects, then to naturall cauſes; not looking unto God the ſupreme cauſe of all. Hence then it appeares that the Fathers are not miſtaken, in attributing the not over-flowing of the ſea to a miracle: howſoever (as your figure ſheweth) the ſea may ſeem to be, and yet is not higher

higher then ſome lands. Neither is there any contradiction in Scripture, though ſometime it make the ſea higher then the land, and ſometime lower; for ſo it is accord ng to the diverſity of coaſts; and becauſe of much moiſture and water found in the bowels of the earth, and in that it is encompaſſed with the ſea, it may be ſaid, that the earth is founded on the waters: therefore no man can be deceived in concluding points of Philoſophie from expreſſions of Scriptures (as you ſay) but from the miſunderſtanding of Scripture; for what is true in Philoſophie cannot be falſe in Divinitie; for in ſubalternall ſciences there can be no repugnancy.

CHAP. V.

Divers Scriptures vindicated from falſe gloſſes: as, Eccleſ. 1. 4. *by which is proved the earths immobility, and heavens motion.* 2. *How the earth is eternall and renewed.* 3. *The Scripture ſpeaketh not plainly and ambiguouſly in the ſame place.* 4. *The Scripture uſeth Metaphors.* 5. *How the earth ſtands out of the water*, 2 Pet. 3. 5. *by which its immobilitie is proved.* 6. *What is meant*, 1 Chron. 16. 30. &c. *by theſe words*, The world is eſtabliſhed, &c. 7. *What is meant* Pſal. 90. 2. *by the earth and the world.* 8. *How the heavens* Prov. 3. 19. *are eſtabliſhed: and the Moon and Starres*, Pſal. 89. 37. &c. 9. *How the heavens* 2 Sam. 22. 8. *hath foundations.* 10. *What are the pillars of heaven in* Job 10. *of the ends, ſides, and corners of the earth in Scripture.* 11. *What is meant* Iſa. 51. 6. *by the planting of the heavens.* 12. *How the earth is eſtabliſhed.* 13. *What* Job *meanes by the earth moved out of its place.*

YOu would faine here overthrow thoſe Scriptures which ſhew the immobilitie of the earth. 1. That place of *Eccleſiaſtes*, (*one generation cometh, and another paſſeth, but the earth ſtandeth for ever.*) You ſay, *That it is not the purpoſe of this place to deny all kinde of motion to the whole earth; but that of generation and corruption.* But I ſay, that it is neither the purpoſe of this place to deny the motition of the earth, nor to affirme the motion of the ſunne: for why ſhould he either deny the one, or affirme the other, which no man doubted of, or called in queſtion? his drift is to prove the vanity of mankinde, from the ſtability of the earth, and motion of the ſun, windes and waters; thus man is inferiour to the earth, becauſe the earth is firme, ſtable, and immoveable; whereas man abideth not in one ſtay, *but cometh forth like a flower, and is cut downe, he flyeth like a ſhadow, and continueth not.* Or (as it is here) *he cometh and goeth*; ſo that coming & going are motions, to which man is ſubject, and are oppoſite to the immobilitie of the earth. The Antitheſis then or oppoſition here is not between the ſubſtance of man and of the earth; Eccluſ. 1. 4.

for

for man in reſpect of his ſubſtance is permanent as well as the earth, if either we conſider his ſoule, or his body, according to the firſt matter; but the oppoſition is between the qualities, outward eſtate, and life of man, and the immobilitie of the earth, ſo that the ſtanding of the earth muſt be meant either of its permanency, or immutabilitie, or immobilitie: not the firſt, for man (as I ſaid) is not inferiour to the earth in permancie; not the ſecond, for the earth is ſubject (as all ſublunary things are) to mutability and changes; therefore the third, which is the earths immobility, muſt needs be underſtood. And if *Solomon* had thought otherwiſe, to wit, that the earth moved, and the ſun ſtood ſtill; he would have ſaid, *The ſunne ſtandeth for ever, the earth ariſeth, and the earth goeth downe, &c.* But, for all his knowledge, he was ignorant of this quaint piece of Philoſophie. Againe, he proves mans vanity from the motion of the ſunne, windes, and waters, though they move and are gone for a while, yet they returne againe; but man being gone returnes no more: ſo that man hath neither the ſtability of the earth, but paſſeth away, and being paſt, hath not the power to returne againe, as the ſunne, winde, and waters doe. It is plaine then, that the ſtanding of the earth is oppoſed to its locall motion, and to the motion of men coming and going; but it were ridiculous, as you ſay, to inferre that the earth is immoveable, becauſe permanent; for the mill and ſhip may be permanent, and yet move; this illation is none of ours, we ſay it is immoveable becauſe *Solomon* here ſayes ſo; for he ſaith it ſtandeth; and if ſtanding be motion, then the earth moves. It is more ſafe for us to ſay, That the earth is immoveable, becauſe *Solomon* ſaith it ſtands; then to ſay it is moveable, becauſe the word ſtanding may ſignifie permanency, or abiding. As for the motions (as you cal them) of generation and corruption, from which you free the earth, they are not indeed motions, but mutations: *Motus eſt à termino poſitivo, ad terminum poſitivum.*

You checke the Jewes for collecting the earths eternity from the word (*Legnolam:*) albeit I know that this word doth not alway ſignifie eternity, but a long continuance of time; yet that the earth is eternall, *à poſteriori*, I thinke you will not deny, except you will tread in ſome new way of your owne different from that both of ancient and modern Divines, who affirme with the Scripture, That *there ſhall be a new earth*; but new in qualities, not in ſubſtance; a change of the figure, not of the nature; of the forme, not of the ſubſtance; a renovation of that beauty which is loſt by man, but no creation

ation of a new Eſſence; ſo that the Jewes might juſtly inferre from *Solomons* words, that *the earth is eternall*, or *ſtabliſhed for ever*.

You ſnap at Mr *Fuller* for urging that theſe words of *Solomon* muſt be all underſtood literally, and not ſome of them in reference to appearance, but without cauſe; for can the ſame Scripture with one breath blow hot and cold? At the ſame time ſpeake plainly and ambiguouſly; in the ſame ſentence have a double meaning? The Scripture which is plaine and ſimple, is farre from double dealing. Will any thinke that when *Solomon* ſaith, There be three moveable bodies, the Sun, Windes, and Rivers that there are indeed but two; and that the Sun moves not but in appearance, that is, moves not at all? This is to make the Scripture indeed a noſe of wax; for what may I not interpret this way? Chriſt fed the people with five barley loaves, that is, with foure loaves, for one was a loafe but in appearance. Three Wiſe-men came from Perſia to worſhip Chriſt, that is, two came indeed, but the third came onely in appearance. You would laugh at me, if I ſhould tell you, that of any three ſhips or mills, which move really, one did move apparently; whereas both you & I ſee them move really. Now, if the Sun doth not move, why doth the Scripture ſay it doth? What danger would ariſe if it ſpoke plaine in this point? You ſay, *That the Scripture ſpeaks of ſome naturall things, as they are eſteemed by mans falſe conceipt*: But this is a falſe conceit of yours; the Scripture doth not cheriſh or patroniſe the falſhood of our conceits; the end of it is to rectifie our erroneous conceits. It is true that in high and obſcure points of Divinitie, the Scripture condeſcending to our capacity, uſeth the tearms of familiar and earthly things; that by them we may by degrees aſcend to the love and knowledge of ſpirituall things; for the naturall man underſtandeth not the things of God: but in naturall things which are obvious to our ſenſes, we need no ſuch helps. If the Sunne ſtood ſtill, it were as eaſie for us to underſtand his ſtanding, as his moving.

What you talke of the ends of a ſtaffe, and of the ends of the earth, is impertinent and frivolous; for the Scripture for want of proper words uſeth metaphorically: and becauſe there is no other word to expreſſe the remote bounds of the earth, then the word *End*, therefore the Scripture uſeth it. But you inferre that becauſe the ends of a ſtaffe, and the ends of the earth cannot be taken in the ſame ſenſe; that therefore the motion of the ſun, and of the winds muſt be underſtood in divers ſenſes: make an Enthymeme and ſee the

conſequence; the Scripture ſaith, That *a ſtaffe hath ends*, and that *the earth hath ends*, which cannot be underſtood properly, and in the ſame ſenſe; *ergo*, when the Scripture ſaith, *The ſunne moveth, and the winde moveth*, both cannot be underſtood properly and in the ſame ſenſe: as if you would ſay, The Scripture affirms that Angels are the ſons of God, and that Judges are the ſons of God, but not in the ſame ſenſe: *ergo*, when the Scripture ſaith, *That the raven flew out of the Arke, and the doue flew out of the Arke*: both muſt not be underſtood in the ſame ſenſe, but the one properly, the other in appearance.

2 *Pet.* 3. 5. Our ſecond proofe out of Scripture which you goe about to undermine, is that of Saint *Peter*: *The heavens were of old, and the earth ſtanding out of the water, and in the water.* You ſay, *That the word συνεστῶσα, is equivalent to* (*fuit*,) but I ſay, that this were to confound two predicaments, to make the eſſence and accident all one: the ſite or immobility of the earth, and the eſſence or exiſtence thereof cannot be one or equivalent. 2. This were to commit a plaine tautology, for ſo the words muſt run; The earth was, was out of the water; if theſe two words (*was*) and (*ſtanding*) be equivalent. 3. The Apoſtles ſcope is not only to ſhew that God made all the earth, (as you ſay) but that he made it thus; that is, ſtanding or immoveable: that he is the authour not onely of its being and eſſence, but alſo of that inſeparable accident of immobilitie. 4. We collect not the reſt and immobilitie of the earth from the bare expreſſion of its being or creation, but from its being thus made; for ſo we may reaſon; What God hath made to ſtand faſt out of, and in the water, is immoveable; but God hath made the earth thus: *ergo*, it is immoveable. 5. *It were ridiculous to conclude the immobility of a ſhip or a mill-wheele, becauſe a part of them was made to ſtand above, and another part under the water for they were not made for that end to ſtand, but to move*: But if you had brought your Simile from the rockes of the ſea, you had done well; for God made theſe rockes to ſtand partly above, and partly under the water; and hee made them not to fleete with the Iſles of the lake Lommond, therefore they are not moveable, for God hath made them immoveable; and ſo hee hath made the earth: therefore, both the old and new Latine tranſlations, doe uſe the word *conſiſtere*, which ſignifieth *conſtanter ſtare*.

1 *Chr.* 16. 30 *Pſal.* 93. 1. & 96. 10. Our third Argument is taken from theſe words, *The world is eſtabliſhed that it cannot be moved*; which words you will have to be ſpoken of the world in generall, or the whole fabricke of heaven and earth;

earth; but you are widely miſtaken; for in the Hebrew text, the word [*holam*] which ſignifieth the whole univerſe of heaven and earth, is not uſed in any of theſe places; but the word [*Tebel*] which ſignifieth the round globe of the earth, or the habitable world, as *Pagnine* hath it. So the Greek Interpreters in all theſe places uſe the word οἰκουμένη, and not κόσμος, which ſignifieth the whole bulk of the world, ſo called from its beauty: Now οἰκουμένη, is alwaies uſed for the habitable earth, ſo that οἰκουμενικὴ σύνοδος, is a Synod of men dwelling upon earth, and not of Angels or ſtars: And when the Patriarch of Conſtantinople aſſumed the title of *Oecumenicus Epiſcopus*, he did not purpoſe (for all his pride) to bring the Angels and ſtarres within the verge of his Dioceſſe or Epiſcopacy. So the old Latine tranſlation never uſeth the word *mundus*, but *orbis*, and *orbis terræ*; and *Junius* with *Tremelius*, uſe the words *orbis habitabilis*, that is, the earth; ſo that *orbus* is not uſed for *mundus* in any claſſick Author in proſe, but for the earth, or regions and dominions of the earth: as, *Orbis Aſiæ, Europæ, orbis Romanus*, &c. Beſides, in the 96. *Pſalme*, the heavens and the world (as wee tranſlate it) are diſtinguiſhed in the 5. *ver.* God made the heavens: in the 10. *ver.* hee eſtabliſhed the world, or earth. We need not then to have recourſe to a Synecdoche in the three originall Tongues.

Οἰκέω, habito.

But you tell us, That *David* (you would have ſaid *Moſes*) ſeems to make a difference between the earth and the world, when hee ſaith, *Before thou hadſt formed the earth and the world:* hee doth but ſeeme to make a difference, but indeed hee makes none; for the copulative [*and*] is put *exegetice*, for the disjunctive [*or*] here, and elſewhere in Scripture: as in *Exodus*, *Hee that ſmiteth his Father*; in the Hebrew it is, *Abiv ve Immo*, his father and his mother: and in the 17. *ver.* of the ſame Chapter, *Hee that curſeth his father and his mother*, which the Evangeliſt St. *Matthew* rendereth, πατέρα ἢ μητέρα, father or mother: ſo among profane Authors the ſame kind of ſpeech is uſed: as, *Natus annos 60. & ſenex*. Here then God made the earth and the world, that is, hee made the earth, or the habitable world. 2. Wee may explain *Moſes* his words here thus: God made the earth the firſt day, and then it was γῆ, earth; but it was not made habitable till the third day, and then it became οἰκουμένη, a habitable world; and ſo in this reſpect there is ſome difference between the earth and the world, that is, between the earth mingled with the water, and ſeparated from it. *Pſal.* 90. 2.

Prov. 3.19. Because *Solomon* saith, That *God hath founded the earth, and eſtabliſhed the heavens*, you inferre, *That the places of Scripture can no more prove an immobility in the earth, then in the heavens.* But here alſo you ſpeak at randome; for the Hebrew word כונן *Conen* here, which *Arias Montanus*, and the old Latine tranſlate, *ſtabilivit*, doth properly ſignifie, to diſpoſe, or order; and ſo we tranſlate the word *Conenu*, *Pſ.*37.23. *a good mans ſteps are ordered by the Lord.* This word alſo ſig-
2 *Chro.* 1.4. nifieth to *prepare*: as, *David prepared a place for the Ark.* Therefore the LXX. Interpreters explain this word here by ἡτοίμασε, *hee hath prepared the heavens*; and *Junius*, with *Tremelius*, by [*ſtatuit*] *hee hath appointed*, [or diſpoſed] *the heavens.* But what though wee ſhould yeeld that the word may ſignifie to *eſtabliſh*, will it therefore follow that the heavens are immoveable, becauſe eſtabliſhed? No: for there is the ſtability of nature, and naturall qualites, which is oppoſite to mutability, and ſo the heavens are eſtabliſhed; and there is the ſtability of reſt, and ſo it is oppoſite to mobility: thus the earth is eſtabliſhed. But, you will ſay, ſeeing the ſame word [*eſtabliſh*] is ſpoken of both the heaven, and of the earth, how ſhall you know that it implyeth immobility in the earth, and not in the heaven? I anſwer, well enough; becauſe the Scripture, ſpeaking of the earth, ſaith, *It is eſtabliſhed that it cannot be moved*: but the Scripture never ſpeakes ſo of the heavens, but onely that they are *eſtabliſhed*; not a word to ſhew any reſt or immobility in them.

Now you urge us with thoſe places that ſpeak of *eſtabliſhing of the Moon*, *Pſ.*89.37. of *the ſtars*, *Pſa.*8.3. of *the heavens*, *Pro.*8.27. *Why* (ſay you) *ſhould theſe be counted ſufficient expreſſions to take away motion from the earth?* I anſwer, we do not count this word [*eſtabliſh*] of it ſelf a ſufficient expreſſion; for the originall word is ambiguous, and diverſly interpreted, both by the Greek and Latine; and moveable things may be eſtabliſhed; the moving Tabernacle, aſwell as the immoveable Temple. But if I ſhould tell you, that though the Tabernacle be faſtened or eſtabliſhed, yet it is moveable, and the Temple is ſo ſtabliſhed that it cannot be moved: You cannot but ſay, that my expreſſion is ſufficient to ſhew the difference of ſtability in the
*Pſ.*119.90. one, in and the other. So ſpeaks the Scripture in plain tearms of the
*Pſ.*104.5. Earth's ſtability, *Thou haſt founded*, [or eſtabliſhed] *the earth, and it ſhall ſtand: Thou haſt laid the foundations of the earth, that it ſhall not be moved for ever*; ſo it is in the Hebrew. When a thing then is ſaid to be ſo eſtabliſhed, as that it ſtandeth faſt on a ſure foundation, and cannot

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be moved, wee muſt needs acknowledge, that this is a full expreſſion of its immobility; which phraſes are never ſpoken of the heaven, or any ſtarre; wee reade that the Sun ſtood once, but that was by miracle: of any other ſtanding in Scripture we never read. So we read of the moving of the earth by earthquakes, but not elſe, *Iſa.* 13.13. and of removing of iſlands, *Rev.*6.14. but never of a circular motion of the earth: for in that reſpect he hath made the earth that it ſhall not be moved And to tell us, as you do, that the earth is eſtabliſhed ſo onely that it ſhall not be removed, is both to mince the Scripture, and the power of God; for as it is more eaſie to move an heavy body then to remove it, ſo is the power of God ſo much the greater, in that hee hath made a body of ſuch ſolidity, weight, and bigneſſe, that it cannot be ſo much as moved, farre leſſe removed: and if the Scripture be ſo carefull and punctuall in ſetting forth Gods greatneſſe and power in ſo ſmall a matter, as is the moving of a little part of the earth by earthquakes; doubtleſſe it would not have been ſilent in a matter of ſuch admiration and power, as is the moving of the whole body of the earth, if ever hee had moved it, either by himſelfe, or by his Angels, or by Nature his handmaid.

Whereas you ſay, *That* fundavit *cannot be taken properly, as if the earth, like other artificiall buildings, did need any bottome to uphold it.* I anſwer, that *fundare terram* is not to ſettle the earth upon a foundation or bottome, but to make it the foundation of all heavy bodies; and therefore it is called βάσις, θεμέλιον, κατάθεσις, *fundum*, the bottome, and *fundus*, the foundation; ſo that nothing hath any foundation but on and by the earth. Ships floating on the water, have not any foundation, till they be tyed by anchors to the earth; which the Poet knew, when he ſaid,

Anchora fundabat naves:

therefore not metaphorically, but properly, doth the Scripture ſpeak, in ſaying, *God hath founded the earth*; but whereas the heavens are ſaid to have foundations, 2 *Sam.*22.8. by heavens there are underſtood the mountaines, and ſo the vulgar Latine reads it: and ſo in *Pſal.*18.8. the text hath mountaines, and not heavens. Mountaines are called heavens metonymically, becauſe they are in that part of heaven which we call the aire; therefore by the Poets they are called, *Aërei montes*; and ſo all the ſpace from the ſuperficies of the earth upward, is called heaven both in ſacred and profane writings; even this upper part of the earth wherein wee live is called heaven by the Poet:

Sed falſa ad Cœlum mittunt inſomnia Manes;

and the Inhabitants of the earth are called *Superi* by the ſame Poet,

Quæ quis apud Superos furto lætatus inani.

And as hills are called heaven, ſo heaven is called hills by *David*, when hee ſaith, *I will look unto the hills, from whence cometh my ſalvation.* By the foundation of the heavens then, is meant nothing elſe but the foundation of the hills. Now why you ſhould call the earth an artificiall building, I know not: it was neither built by an artificer, nor by the rules and tooles of Art; your earth in the Moon may rather be called artificiall. as being the work, not of God, nor Nature, but of *Copernicus* the maſter carpenter, and his workmen, of which number you are one; but you ſhould doe better, if with that wiſe maſter builder St. *Paul*, you would build upon the corner ſtone, and the foundation Chriſt Jeſus, according to the grace of God which is given to you.

You ſay well, *That the pillars of heaven mentioned by* Job *will not prove them to be immoveable*; for wee know that heavenly pillars are moveable as the heavens are: ſo were theſe two pillars that conducted Iſrael through the deſart, and thoſe night meteors, called fierie pillars. 2. By *heaven* may be meant the Church called oftentimes heaven in Scripture, and by pillars the eminent Doctors of it: So *Peter*, and *Paul*, were called pillars, and every good man ſhall be made a pillar in Gods Temple. 3. By the pillars of heaven may be underſtood the Angels, called alſo the powers of heaven, in the Goſpell. 4. High hills may be called pillars of heaven, not becauſe they uphold heaven, as the Poets write of *Atlas*, but becauſe they are high in the aire, which is called heaven,

——— *caput inter nubila condunt.*

5. The onely true pillar by which both heaven and earth is ſuſtained, is the power of God; which power cannot be ſhaken in it ſelfe, but in its effects. 6. Which way ſoever you take the pillars of heaven they are moveable; but now it will not follow that the pillars of earth are moveable alſo: though the pillars of the Tabernacle were moveable, the pillars of the Temple were not ſo. Such as the earth is, ſuch be its pillars; its ſelfe is immoveable, and ſo are its pillars; except when that great *Sampſon* ſhakes them being grieved for the many wrongs that hee ſuffers by our ſins; then hills, rocks, houſes, and cities tumble down, and multitudes are buried before they be dead. If then we ſhould prove the immobility of the earth, from the ſtability of its pillars, wee ſhould have reaſon for it; but

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to inferre that the heavens were immoveable, becauſe they have pillars, were ridiculous.

We read (ſay you) *of ends, ſides, and corners of the earth, and yet theſe will not prove it to be of a long or ſquare forme.* *Anſw.* Yes it will: for the Scripture doth not deſcribe the earth to us as a ſmooth and uniforme globe, but as a great body conſiſting of divers unequall parts; as hills and vallies, and as a body broken by the irruption of many ſeas, as the Mediterran, &c. Conſiſting alſo of lakes and rivers, not to ſpeake of Iſles and Iſthmus: hath not then the earth in this reſpect many ends, corners, and ſides? if you did ſaile along the coaſts of the earth, you ſhould finde it ſo. 2. The earth of it ſelfe is not round, for without the water it doth not make a globe. 3. Though it were perfectly round, yet it muſt have its longitude and latitude. 4. By the earth the Scripture oftentimes meanes the land of Judea, with the neighbouring countreys: as, his dominion ſhall be from the river to the ends of the earth; which words were ſpoken of *Solomon* literally. *All the ends of the earth have ſeene the ſalvation of God*; which was not ſeen by the Americans in *Davids* dayes. So all the world was taxed under *Auguſtus*, that is, the Roman world. 5. Whatſoever is finite hath bounds and ends, but ſuch is the earth; *ergo*, it hath ends. Therefore as the Scripture by the ends, ſides, and corners of the earth, doth ſhew that it is not round; ſo doth it alſo by the ſtable foundations thereof, ſhew, that it doth not move. *Pſal.* 98. 3. *Luke* 2.

Iſaiah ſpeaketh of the planting of the heavens, which you ſay, 51. 6. *May as well prove them to be immoveable, as that which followes in that Verſe concerning the foundation of the earth.* *Anſw.* I perceive your caſe is deſperate, for like a man that is ſinking in the water, you catch hold of every thing that is next you, though it be weeds and ſuch as cannot help you. For 1. by heavens here may be meant the Church, which is that Vine, that God hath planted with his owne right hand. 2. Though this word heaven were taken in its proper ſignification, yet the planting of heaven is a metaphor, out of which you can conclude nothing, but muſt ſpoile your Syllogiſme with *quatuor termini*. 3. Nothing is properly planted but what hath motion in it, as trees, hearbs, and ſuch like vegetables. This word then may intimate, that there is motion in the heavens, as the word (*foundation*) ſheweth, that there is no motion in the earth; for it is very improper and dangerous for a foundation to move.

When the Scripture ſaith, *The earth is eſtabliſhed: by this word* (you

you anſwer) *is meant onely the keeping of it up in the aire, without falling to any other place. Anſw.* If the earth be eſtabliſhed onely ſo, that it may not fall or be removed to any other place; what ſingular thing hath the earth, that is not in other bodies? for ſo are the heavens eſtabliſhed, and every ſtarre, that they ſhall not be removed out of that place or ſtation which is appointed for them; ſo is the ſea confined within its bounds, which it cannot paſſe. But there is ſomething elſe in the earth whereby it differs from other bodies, and wherein Gods power is the more admired; to wit, *That it is ſo eſtabliſhed, that it cannot be removed:* Nay, more then ſo, it cannot be ſtirred or wagged at all. Thus as Gods glory is admired in the perpetuall motion of other bodies, ſo is it in the perpetuall immobilitie of this. 2. *The earth* (you ſay) *is kept up from falling.* I pray you whither would the earth fall, being in its owne place, and loweſt of all the Elements? if it fall any where, it muſt fall upward, and that is as proper a phraſe, as if I ſhould tell you, the heaven muſt mount downeward: therefore, *Mitte hanc de pectore curam*; never feare the falling of the earth. The Gentiles were afraid that the heavens might fall being held up by the ſhoulders of *Hercules*; therefore *Artemon* it ſeemes was afraid of this, who never durſt venture abroad, but under a braſen target, carried over his head. And one *Phænaces* in *Plutarch* was ſore afraid, that the moon would fall downe, and therefore pitied the Ethiopians and others that were under the moone; but if he had knowne what you know, That there is a world in the moone, his feare had been juſt. It may be the great ſhower of ſtones that fell heretofore *in agro Piceno*, were the ſtones of ſome buildings that had fallen downe in the moone. We need not feare the falling of our earth, which God hath ſo eſtabliſhed, that it cannot be moved.

Job.9.6. *You ſee no reaſon, but that we may prove the naturall motion of the earth from that place in Job, Who moveth or ſhaketh the earth out of her place*; that is to ſay, We may prove a naturall motion out of a violent, or one contrary out of another; we may prove the fire to be cold, becauſe it is hot; or that the earth may move naturally, becauſe it moves violently. The motion that *Job* ſpeakes of, is an earth-quake extraordinary, which is a violent and temporary motion, and of ſome part only; and a concuſſion rather then a motion; the motion that you would inferre from thence, is a naturall, perpetuall, totall, regular, and a circular motion. Will you inferre that becauſe the mill-wheele is turned about violently, that therefore

fore the whole mill is turned about naturally. I have ſeen a Church-tower ſhake when the bells have been rung; but if I ſhould inferre that the whole Church therefore may move circularly, I ſhould feare,

Ne manus auriculas imitetur mobilis albas:

leſt I ſhould be thought a creature of Arcadia. And I hope you are not ſo ſimple as to thinke that God did ever ſhake the whole earth out of its place, or if he had, that therefore it may move naturally and circularly.

CHAP. VI.

1. *The earth is in the middle and center of the world, and why.* 2. *Hell is in the center or middle of the earth.* 3. *The earth loweſt and baſeſt, how.* 4. *Every thing is made queſtionable by ſome.* 5. Ariſtotle *defended.* 6. *The earth is in the center, becauſe in the midſt of the equinoctiall Horizon, &c.* 7. *The imagination muſt be conformable to the things, not theſe to it; the vanity of imagining circles.* 8. *Aſtronomers reproved, and their vanity ſhewed, chiefly about the bigneſſe of the ſtars.* 9. *The earth is the leaſt circle: therefore the center, how underſtood.*

HEre you will not upon any tearmes admit, that the earth is the center of the Univerſe, becauſe our arguments (you ſay) are inſufficient. *Anſw.* Our arguments may be inſufficient to you, who hath an overweening conceit of your ſelfe, and a prejudiciall opinion of other men. But our arguments have been hitherto accounted ſufficient, by moderate, wiſe, and learned men; but to your ſublimated underſtanding they give no ſatisfaction; there are ſome men that are never content, and nothing to them is ſufficient, no not Gods owne word: but what though our arguments were inſufficient? will you therefore reject them? You may by this meanes reject all humane learning, for it hath not that ſufficiency which perhaps you require. We know here but in part, the ſufficiency of knowledge is reſerved for a better life. — *Si quid tamen aptius exit:* But if you have more ſufficient arguments for your opinion, impart them to us, and we will imbrace them; if you have not, *bis utere mecum*; content your ſelfe with theſe till you know better. But you promiſe that you will cleerly manifeſt the inſufficiency of our arguments in this Chapter. Let us ſee if you will be as good as your word, which we have not yet found in you; only, large promiſes without performance.

Larga quidem ſemper Drance tibi copia fandi.

1. We ſay that the earth is the center, not the ſun; becauſe the earth is lowermoſt, and under the ſunne. To this you anſwer, *That*

ſince the ſun is ſo remote from the center of our earth, it may be properly affirmed that we are under it, though that be in the center of the world.

Anſw. That the ſunne cannot be the center of the world, and that
C.1. ſec. 2. the earth muſt needs be the center; we have proved againſt *Lansbergius*, for neither could there be Eclipſes of the Moone, nor could we diſcerne the medietie of heaven, nor of the Zodiac, if the earth were not the center. And whereas the center is the middle of the globe equally diſtant from all the parts of the circumference; the wiſe God placed the earth in the midſt of this great ſyſteme of the world, not onely for mans ſake, who being the Lord of this univerſe, and the moſt honourable of all the creatures, deſerved to have the moſt honourable place, which is the middle: but chiefly that man with all other animall and vegetable creatures, might by an equall diſtance from all parts of heaven have an equall comfort and influence. For imagine there were two earths, this which is in the center, and another out of the center; the influence and powers of heaven muſt needs more equally concurre and be united in this, then in that: and if the place be it which conſerves the creatures, what place more fit for conſervation, then that which is in the midſt of the world? Having an equall relation to all parts of heaven, and all the powers of the univerſe uniting themſelves together in the earth, as in a ſmall epitome. Therefore nature which is the hand-maid and imitatour of God, layes up the ſeed in the middle of the fruits, as being not onely the ſafeſt part, but alſo becauſe in the middle as in the center, all the powers of the plant meet together in the forming of the ſeed, wherein it doth perpetuate it ſelf. How unconvenient and unhealthy were mans habitation, if it were neerer the heaven then it is? for the aire would be too pure and unproportionable to our groſſe bodies, for they that travell over high hils find their bodies much diſtempered. *Acoſta* witneſſeth, that they who travel over the high hils of Peru, fall into vomiting, & become deſperately ſick, and many loſe their lives, by reaſon of the ſubtilty & purenes of the air. But your words would be a little corrected; *For ſince the ſun* (you ſay) *is ſo remote from the center of the earth, we are under it.* Indeed we are under it, in that it is above us; but not for that it is remote from us or from the earth. *Under* and *above* are relative tearms, ſo are *neerenes* & *remotenes*.

2. You ſlight the conſtant and perpetuall doctrine of the Church from the beginning, concerning the ſite of hell, which is in the center or bowels of the earth; and you call it an uncertainty; but

ſo

ſo you may call any doctrine in Scripture, for where will you have hell to be, but either in heaven or in the earth? Theſe are the two integrall parts of this univerſe; in heaven I hope you will not place it, except you will have it to be in the moone. But if there be any hell there, it is for the wicked of that world: as for the wicked of this world, they are not ſaid to aſcend to hell in the moone, but to deſcend to hell in the earth, as *Core* and his fellowes. Therefore it is called a lake, burning with fire and brimſtone; *Abyſſus*, a deepe gulfe; *Gehenna*, the valley of Hinnon. By *Tertullian*, *Theſaurus ſubterraneus ignis arcani*, The treaſure of hid fire under ground. The Apoſtle ſpeakes of χαλαχθόνιοι of thoſe that bow to Chriſt under the earth. *Horrendæ voragines*, fearfull gulfes they are, ſaith *Lactantius*. And that which you call uncertainty, is called *certa fides*, a ſure faith, an undeniable truth by *Prudentius*:

Apol. c. 47. *Philip. 2.* *L. 7. Inſtit. c. 7.*

Certa fides rabidos ſub terra nocte caminos, &c.

And as this hath been the conſtant opinion of the Church, as may be ſeen both in the Greeke and Latine Fathers, ſo hath it been beleeved by the Gentiles, as I could inſtance out of Greeke and Latine Poets of *Ἅιδης*, *Tartarus*, *Phlegethon*, *Cocytus*, *Styx*, *Acheron*: which they ſhew to be in the center or bowels of the earth; therefore I hope you are none of thoſe that *Juvenal* ſpeaks of, who would not beleeve there was any hell under ground:

De hamartigenia.

Eſſe aliquos manes, & ſubterranea regna, &c.
Nec pueri credunt. ——

Satyr. 2.

For whoſoever denied hell to be below, denied that there was any ſuch place at all: as, *Pythagoras*, *Epicurus*, *Lucretius*, *Tully*, *Seneca*, *Lucian*, *Pliny*, and ſome others; to whom I may adde the Gnoſtickes, who held there was no other hell, but this world, whom *Irenæus* refutes. 2. As hell muſt needs be in the earth below, ſo muſt heaven the place of the bleſſed, be above all theſe viſible heavens; which is called, *The third heaven, and the heaven of heavens. Therefore, it is no uncertainty* (as you ſay) *that it is concentricall to the ſtars*: for if it be not, tell us where you will have it? in the moone, or in the Elyſian fields, or in Mahomets paradiſe? I wiſh you would thinke the dictates of Gods word to be more certaine then your groundleſſe phanſies, and that the Scripture is a more ſtable foundation to build upon, then the Moone. 3. *It is not an uncertainty that places muſt be as farre diſtant in ſcituation, as in uſe*: Therefore *Abraham* ſaith, That *there is* μέγα χάσμα, *a great gulfe, or gap between* Lazarus *and* Dives. So *David* diſtinguiſhed between the height of heaven, and

Irenæus l. 5. c. 31. *Pſal. 139.*

Amos 9. the deepe of hell; ſo doth *Amos*, and *Eſay*: and it's fitting that hea-
Eſay. 14. 13, 14, 15. ven and hell, the ſaints and the wicked, the joyes of the one, and torments of the other, be as remote as may be; which the Poet knew:

——*Tartarus ipſe,*
Æn. 6. *Bis patet in præceps tantum, tendítque ſub umbras,*
Quantus ad æthereum cœli ſuſpectus Olympum.

2. Theſe things alſo you will have to be uncertaine. 1. *That bodies muſt be as farre diſtant in place as in nobility.* 2. *That the earth is of a baſer matter then other Planets.* 3. *That the center is the worſt place.* *Anſw.* Theſe are not uncertainties to men that have ſenſe and reaſon; for ſenſe tells us, that the groſſer ſimple bodies are, the lower place have they in this Univerſe: the heaven being a quinteſſence and of the pureſt matter, is uppermoſt; next is the fire, then the aire, then the water, and loweſt of all, the earth, as being the groſſeſt; and reaſon tells us, that God is the God of order; and what a diſordered world ſhould we have, if groſſe and heavy bodies were uppermoſt, the light and pureſt bodies beneath? We ſee in our owne bodies, that the groſſer the ſpirits are, the lower they are: the animall having their reſidence in the head, the vitall in the heart, the naturall in the liver. 2. Nor is it uncertaine that the earth is of a baſer matter then the Planets; the obſcurity and dulneſſe of the one; the beauty, light, and ſwiftneſſe of the other, doe ſhew what odds there is in the matter. How are all Divines deceived who put men in minde of the baſe materialls of their body; and teach that God made men of the baſeſt element to humble
Plin. him? *Animalium ſuperbiſſimi origo viliſſima*; and I thinke you are Planet-ſtruck, or have a planeticall head, who thinke the earth to be a Planet. 3. That the center is the worſt place, is not held by us; for though we ſay the earth to be the ignobleſt and baſeſt element, in reſpect of its matter, and therefore the loweſt; yet as it is the center and habitation of the nobleſt creature, it is placed in the middle, as being the nobleſt place.

4. Our ſecond argument is grounded (you ſay) upon two fooliſh foundations. 1. That the whole frame of nature moves round, excepting onely the earth. 2. That the whole earth is heavy, and more unfit for motion then the Planets: *Theſe you reject, becauſe they are* (you ſay) *the thing in queſtion.* *Anſw.* You are doubtleſſe that third *Cato* that fell from heaven; or *octavus Sapientum*. Our foundations of the earths ſtability, and gravity, are fooliſhneſſe with you;

you; ſo was the Goſpell fooliſhneſſe to the Gentiles; but you doe well to obſerve *Solomons* rule: *Anſwer not a foole according to his folly*; which is the reaſon that you anſwer not at all to theſe fooliſh foundations of ours; but onely with this; they are the thing in queſtion. But if you queſtion the ſtability and gravity of the earth, is not your queſtion as fooliſh as our foundation? but ſeeing you may queſtion every thing, every thing may be a fooliſh anſwer, or polition to you. And what doe you thinke of the Scripture when it ſaith; *The earth ſtandeth faſt, and the ſtars move?* doth the Scripture in this ſpeake fooliſhly? Surely we are content to preferre the fooliſhneſſe of Scripture to the wiſdome of your ſcribling; becauſe ſuch conceited wiſdome is but fooliſhneſſe with God. What foundation either in Divinity or Philoſophy, what Article of the Creed hath not been queſtioned? ſhall they be counted fooliſh foundations, or unfit to diſcuſſe controverſies, becauſe they have been queſtioned by pernicious Heretickes? If you were as wiſe a man as you pretend your ſelfe to be, you ſhould have with ſolid arguments refelled our foundations, which are ſo fully demonſtrated by ſo many Philoſophers, and then you ſhould have ſhot your fooles bolt. The truth of theſe foundations I have ſhewed already, to which you anſwer nothing, therefore here I will not *actum agere.* *Prov. 26. 4.* *Contra Lanſberg.*

5. Our third Argument is, That our earth muſt be in the center, becauſe it is in the loweſt place, or middeſt of the world; this *Ariſtotle* proves by the deſcending of all heavy to the center, and the aſcending of light bodies from it: *But you reject* Ariſtotle *as being a maſter of Syllogiſmes, and being deceived whilſt he ſuppoſeth that, which he pretends to prove.* But indeed you are much deceived your ſelfe, whilſt you reject this maſter of Syllogiſmes, who doth not ſuppoſe what he pretends to prove, but ſubſtantially proves, what you thinke hee ſuppoſeth. Hee ſaith the earth is the center, and thus ſyllogiſtically out of him it is proved; To what place heavy bodies deſcend, that place is the center; But to the earth, heavy bodies deſcend; *ergo*, the earth is the center. You ſee now that this maſter of Syllogiſmes doth not ſuppoſe that which he brings unto the concluſion, but proves the earth to be the center by a *medium*, which you cannot anſwer: ſo that being put to your ſhifts, you know not how to elude the force of this and other arguments; but by falling to your art of multiplying centers and circumferences, which is not difficult to you, that can multiply worlds. And be-

cauſe you cannot be ſo impudent as to deny the aſcending of light bodies; you ſay, *That they aſcend to ſome circumference which we cannot reaſonably affirme to be concentricall with that of the world.* But I would know of you, how you can reaſonably affirme that circle to be eccentricall, which we ſenſibly perceive to be concentricall to the world? If neither you nor we can perceive that circumference to which light bodies aſcend eccentricall to the world, what reaſon have you to affirme it? or how doe you prove what you affirme? May you not as well tell us, that there are more ſuns then this one which we ſee? For you will ſay that we cannot reaſonably affirme there is but one ſun. But you ſay, *We cannot prove the deſcent of heavy bodies to the center, nor the aſcent of light bodies to the circumference of the world; becauſe all our experience in this kind, extends but to things that are on earth, or in the aire above it.* I pray you good Sir, how farre doth your experience reach beyond ours, that you ſhould deny this our aſſertion? Have you beene in the moone, and obſerved that which we cannot finde here below? We ſee *quantum acie poſſunt oculi ſervare*, as farre as our eyes will give us leave; to wit, light bodies mounting from the center towards the circumference; doe you ſee otherwiſe? I know you doe not, and cannot though you had as many eyes as *Argus*: therefore keep your wilde opinions to your ſelfe, for ſo long as you can neither by ſenſe nor reaſon perſwade us, your bare word will be too weake an argument to worke upon our beliefe. You conclude, *That it were a ſenſleſſe thing, from our experience of ſo little a part, to pronounce any thing infallibly concerning the ſituation of the whole.* I grant our experience to be little, but yours is leſſe, or none at all: a little is better then none, and we may more boldly inferre, that there is but one center, and one circumference; (becauſe all light things aſcend to one circumference, and all heavy things deſcend to one center) then you can inferre two centers, and two circumferences; whereas you never knew any light thing aſcend, or heavy thing deſcend to any other circumference and center, then to theſe which we maintaine: are not you therefore much more ſenſleſſe then we? for we follow the direction both of our ſenſe and reaſon; ſo doe not you.

6. Our Aſtonomicall reaſons you refell as wiſely as you have done the reſt: for you grant us, *That the earth is in the midſt of the equinoctiall, horizon, and other circles; but you deny that from hence can be concluded that it is in the center of the world.* It ſeemes then that the equinoctiall, &c. are not concentricall to the world, and that the earth

earth may be in the midſt of the horizon and equator, though never ſo much diſtant from the center; and what is this but to make another world? conſiſting of another heaven and earth? For if this earth be under any other equinoctiall beſides that of the *primum mobile*, or any other horizon, it cannot have the heaven equally on all ſides of it, and ſo cannot be in the loweſt place which is the center, though it be the heavieſt body; and ſo againſt its nature muſt be higher then that body which is in the center. This is to take away that order which God hath placed in the creatures, to multiply worlds, and to bring in a ſtrange confuſion. And what a wiſe reaſon doe you give us why the earth would remaine in the midſt of theſe circles, that is, the equinoctiall, &c. though diſtant from the center; *becauſe it is the eye that imagins them to be deſcribed about it?* So then the earth doth not goe out of the midſt of theſe circles, becauſe the eye imagines them, &c. You have a ſtrange faſcinating eye, that can keepe the earth within its circles; if you ſhould winke; or if you loſe your eyes with your great patron *Democritus*, would not the earth give you the ſlip and fall out of your circles into the center of the world? Beſides, I had thought that the action of the eye had been to ſee, not to imagine. As you have made a confuſed Chaos in the great world, ſo you doe in the little world too, confounding the inward and outward ſenſes, the ſight and the imagination: I thinke you were begot of *Chaos* and *caligo*. Againe, what a reaching eye have you, that can deſcribe circles about the earth? If you had ſpoken of an artificiall Globe, you had ſaid ſomething; but if your eye were as big as that of *Polyphemus*,

Argolici clypei, aut Phœbæa lampadis inſtar,

yet you could not deſcribe with your eye a circle about the earth: your imagination may deſcribe it, but not your eye: your imagination cannot be the cauſe why the earth remaines within its circles; your imagination muſt be conformable to the reality of things, and not they to your imagination: for though you imagine that there is a world in the moone, that the earth moves, &c. yet there is no ſuch thing, becauſe the earth is in the center: wee imagine it to be ſo, and beleeve it alſo; but our imagination or beliefe do not make it to be ſo; therefore, our collection is not weak when we inferre that the earth is in the center, becauſe it is in the midſt of theſe circles which are concentricall to the world; or becauſe the parts and degrees of the earth doe anſwer in proportion

to

to the parts and degrees of heaven, which they could not well doe if the earth were eccentricall.

7. Now I thinke you go about to conjure us with your figures, circles, and characters, and to hem us in with a circle made by your pen, as *Popilius* the Roman Legate did incloſe King *Antiochus* within a circle made with his rod: you remove the earth from one center to another, with more facility, then *Archimedes* could have done with his engine: you transferre the ſtarres from one circle to another at your pleaſure; you can doe I thinke as ſhe in the Poet,

Siſtere aquam fluviis & vertere ſidera retro;

and all this ſtirre is to informe us, that though the earth be never ſo farre diſtant from the center of the world; *yet the parts and degrees of your imaginary ſpheare about it will be alwayes proportionable to the parts and degrees of the earth.* And what of all this? You may imagine what ſpheares you will, and in your imagination place the earth as you will, yet the earth ſtandeth faſt for ever in this great fabricke of the world as the center, though in your head it move to and fro. You may place the earth upon the top of the *primum mobile*, and imagine a ſpheare about it, with proportionable degrees, and parts to thoſe of the earth; wee may retort theſe words upon the ſunne your center, that though it be never ſo farre diſtant from the center of the world, yet the parts of an imaginary ſpheare about it will be proportionable to the parts of the ſun: but though in your imaginary circle there be a proportion of parts and degrees to the earth removed from the center, I would know if the earth therefore is removed from the center: Or if you ſhould temove the earth ten or twenty degrees neerer the pole Articke, or to the Zenith of the Meridian from the center; is there, or can there be any proportion between the two hemiſpheares? Will not the one be ſo much the leſſe, by how much the other is inlarged? Or can the true ſpheare of heaven be divided equally into twelve parts, or ſignes, ſo that ſixe be alwayes above the earth, and ſixe below? Or can the ſtars in both hemiſpheares appeare of the ſame bigneſſe? Doubtleſſe though you make a proportion in your imaginary ſpheare, to your imaginary earth, in your imaginary center; yet there can be no proportion between the reall ſpheare of heaven, and the reall earth, which is the reall center of the world: if it ſhould be removed from its place where it is, your imaginations then are but the images, phanſies, and toyes of your head, without ground or ſolidity; therefore they are neither ſo ſtrong, nor we ſo weake, as that they

ſhould

ſhould make any impreſſion upon our beliefe, as the mothers imagination doth upon the tender Embryo in her wombe.

When you are preſſed with the manifeſt abſurdities and inconveniences which ariſe from removing of the earth from the center of the univerſe, you have no other way to eſcape, but like a hedgehog, to ſhrinke back into your imaginary globe or circle: for you grant that the earth muſt needs be placed both in the axis and æquator, *but that muſt be in the center of the ſpheare which you imagine about it, and not in the midſt of this univerſe.* But why muſt the earth be removed from being the center of the univerſe, which by ſenſe, reaſon, daily experience, and continuall obſervation of Aſtronomers, is knowne to be the center? Why I ſay muſt it be removed from its owne reall circle, to your imaginary circle? What inconvenience will follow in the world, if it remaine the center of the univerſe? Or wherein ſhall the world be bettered, if it be removed to your ſuppoſed circle? Nay, what abſurdities will not follow upon this removall, which you will never be able to avoid for all your ſtarting hole? for whereas you ſay, *That though the earth were as far diſtant from the center, as we conceive the ſunne to be, yet it may be ſtill ſcituated in the very concourſe of the axis and æquator.* Truly, though we ſhould conceive it to be ſo farre diſtant, yet it would not be ſtill in the concourſe of theſe two lines; for if either the ſunne or the earth were there ſtill, there would be a perpetuall equinox through the world, neither would there ever be any increaſe or decreaſe of dayes and nights.

Now you preſent unto us a Scenography or plat-forme of your imaginarie world, in which, like another *Joſhua*, you make the ſunne to ſtand ſtill, ſo that here is a perpetuall ſolſtice; if that *American* (who would not acknowledge the ſunne for a god, becauſe it never reſted) had ſeen your ſun, or had known of him what you know, he would have recanted his opinion. What fooles were the Poets to beſtow ſo rich a chariot, and foure prancing horſes on the ſunne, who could make no uſe of them? they ſhould have beſtowed this gift upon the earth, for ſhe it is that undertakes all the toile, and *rejoyceth as a Gyant to run her courſe.* *Ovid's* ſecond booke of Metamorphoſis muſt be mended, and *Phaeton* muſt preferre his petition to the Earth his mother, and not to the Sun his father; except perhaps in thoſe dayes the Sun did travell about the Earth, but now being wearie to go about ſo often, and to take ſuch paines for her thankleſſe inhabitants, hath given over this toile, and hath

left the earth to ſhift for her ſelfe and children. The reaſon why you preſent this figure to us, is to let us ſee, *That though the ſunne be in the center, and the earth in the ſuns orbe, yet that there can be no Eclipſe, but when the ſunne and moone are diametrically oppoſite.* But here your opinion is diametrically oppoſite to the truth, for the line from the center to the circumference, is but a ſemidiameter; and indeed the ſunne is diſtant from the moone in your figure, nothing neere a ſemidiameter, and yet your moone is eclipſed. But what a miſhapen world have you made us? in which you have placed the ſunne lowermoſt, and the earth above the ſunne, and hath made ſuch a vaſt circuit for the earth, and ſuch a little circle for the moone. You told us afore, that the earth drawes about the moon, but in your figure it cannot be ſo; for you have made the earth to compaſſe the ſunne round; but the moone to fetch a compaſſe of her owne aſide off from the ſunne: ſo that whereas you have placed the earth in *Aries*, ſhe is between the ſunne and the moone, but when ſhe comes about to *Libra* the oppoſite ſigne, then the ſunne will be between the moon and her. This is indeed a ſtrange world, and doubtleſſe none of Gods making; I wiſh I were out of it, for I am wearie and ſorrie to ſpend time in refuting of ſuch toyes.

You doe well to confeſſe the uncertainty of finding out the exact diſtance of the firmament, which is but conjecturall according to mens fancies, and ſo indeed are the motions, and magnitudes, and number, and order of the ſpheares, and ſtarres; about which Aſtronomers have ſo many digladiations and oppoſitions, which were tedious but to name. From their conjectures and uncertainties have proceeded ſuch a number of conjuring words: as, Trepidations, Retrogradations, Excentricities, concentricities, Epicyles, Acceſſions, Receſſions, and I cannot tell what; ſo that as *Cato* ſaid of Sooth-ſayers, I may ſay of Aſtronomers, It is a wonder that they do not laugh at one another. The beſt of them all are but

Cui vita in terris animæ, & cœleſtium inanes:

They gaze and ſtare on the ſtars, and diſpute, and aſſever with great boldneſſe, that each ſtar is of ſuch and ſuch a bigneſſe and altitude, and that they move thus and thus; and that there be ſo many of each magnitude: and ſo expert they are, and quick-ſighted in theſe things that are ſo remote, and yet cannot perceive the things that be hard at hand: therefore *Anaximines* gazing on the ſtars, fell in the ditch, and was checked by his maid for his curioſity in things beyond his reach, and neglecting that which moſt concerned him.

Saint

Saint *Ambroſe* complained of the Aſtronomers of his time, that they were buſie in meaſuring of the heaven, in numbering of the ſtars, but careleſſe of their ſalvation; that was indeed, *Relinquere cauſam ſalutis, erroris quærere.* Even like the Phariſees whom Chriſt reproves, That they could diſcerne the face of the skie, and of the earth, but could not diſcerne the time. Saint *Auſtin* preferres that man who is conſcious of his owne infirmities, to him that is curious in the ſpeculation and ſcrutiny of the ſtars: *Laudabilior eſt animus cui nota eſt infirmitas ſua, &c.* Even in the opinion of *Socrates*, it's παραφρονῆσαι, to be mad, to inquire curiouſly into theſe celeſtiall things, which are μὴ ἐυρετὰ, not to be found out by us; *Furioſi dementeſque ſunt judicandi*, they are furious and mad men, &c. ſaith *Lactantius.* I will not condemne the good uſes that may be made of Aſtronomy in calculation of times, obſervation of ſeaſons, prediction of eclipſes, and ſuch things as have their immediate dependence from the oppoſition and conjunction of ſtarres; and the uſes that may be made of it in phyſicke, and in the campe: but that which I reprove, is the vaine curioſity of men, who cannot be content to know with ſobriety things revealed, muſt needs with *Phaeton* and *Icarus* meddle with theſe heavenly bodies, in vaine and curious ſpeculations; the knowledge whereof in this life is denyed us, as being a part of *Adams* puniſhment for his affected knowledge, and being a meanes for us to have recourſe to Chriſt, in whom are hid all the treaſures of wiſdome and knowledge. Therefore, for their needleſſe paines, and preſumptuous curioſity, God doth puniſh them with multitudes of contradictory opinions. Who can ſufficiently laugh to heare their jars and diſſentions, ſaith *Theodoret*? for their difference is not about the meaſuring of an acre of ground, but of the whole world. Now (ſaith the ſame Father) who can meaſure the whole earth! τίς ἅπασαν μέλῃ ἂν περιλαβεῖν τὴν γῆν; God himſelfe asketh *Job*, *Who is it that hath laid the meaſures of the earth, and who hath ſtretched the line upon it?* and he asketh him, *whether he hath perceived the breadth of the earth*, *Ver.* 18. intimating hereby, the impoſſibility thereof, and ſhewing what difference there is between Gods knowledge and mans: ſaith Saint *Chryſoſtome* on that place; διὰ τῶν διδάσκει αὐτὸν τὸ μέτρον αὐτῶ ἢ ἐκείνου. For God (ſaith the ſame Father) will let *Job* ſee how much man is inferiour to him, in that not onely hee cannot doe the workes that God hath done, but alſo that he hath not the knowledge of them. As it was Gods proper worke to make the earth, ſo it is proper to him alone

Luke 12.56

L.4. De trin. In Præm. in Xenoph.

L.3.c.6. De falſ. ſapient.

Serm.1. De fide.

Job 38.5.

to know the measure of it: if then we know not the earths measure which is but a point in comparison of heaven, what madnesse is it to measure the heavens, or to define the motions, scituations, altitude, densitie, or other accidents of them unknowne to us? This is, *cœlum ipsum petere stultitia. Knowest thou the ordinances*, (or as some *Verse* 22. translations have it) *the conversions of heaven?* saith God to *Job*. The Psalmist tels us, that *it is onely he that numbereth the stars, and calleth them all by their names.* He bids *Abraham* tell the starres if hee could, shewing that indeed he could not.

8. From hence appeares the vanity of your side, who thinke, *That the stars would seeme no bigger to us then they now are, though our earth were neerer to them by* 2000000. *Germane miles, which is granted to be the diameter of that orbe wherein the earth is supposed to move.* I pray how come you to know this? by relation, or revelation, or reason, or experience? or have you dreamed it? *Qui amant ipsi sibi somnia fingunt.* Or doe you know it by the help of a perspective? You tell us, that the better the perspective is, the lesser it makes the stars to appeare; if my spectacles were of that quality, I could fling them away, and trust to my owne eyes: I wish you could tell us, how many Germane miles would suffice to finde out the true bignesse of the stars; or in how many yeares will the bodies of the Saints be in ascending to heaven; you must pardon us if we beleeve not what you say, such an infinite disproportion doe you make both betweene the bignesse and distance of our earth and the fixed stars. *And though we will not thinke elephants and whales to be fictions and chimara's, because they are bigger then mice*; yet if you should tell us of a whale that were as big as the Ile of Saint *Laurence*, or of great Britaine; and of an elephant that were able to overturne the Alpes with his trunke; or of a Camell that had a bunch on his backe as high as the cape or top of Tenariff, we would laugh sooner then beleeve such monstrous absurdities. And yet the disproportion of these supposed creatures to mice is nothing, to that of the earth and fixed stars. *And the like credit doe we give to that incredible celerity of the eighth spheare, of which Astronomers write, and to the rest of their conceits concerning the reaching of the suns orbe to the pole starre; and that the circle of the pole star is above foure times bigger then the orbe of the sunne; and that the semidiameter of the earth, makes little or no difference in the appearance of the sunne; as if the observations from the center and surface, were of the same exactnesse.* Whereas, never any man hath been in the center to know this, neither doe the Astronomers

agree

agree amongſt themſelves about the compaſſe and diameter of the Earth; *Ariſtotle, Hipparchus, Eratoſthenes, Ptolomy, Alphragan, Fernelius,* and the later Profeſſors of that faculty, being all of different opinions; ſo that many Aſtronomicall principles are grounded upon meere uncertainties.

2. Wee doe not ground our argument (as you ſay) upon this ſuppoſition, *That every body muſt neceſſarily be of an equall extenſion to that diſtance from whence there doth not appeare any ſenſible difference in its quantity, as you inſtance in a Bird, and a Tree: as that the Tree ſhould be accounted by us forty paces thick, becauſe wee approaching neerer to it by forty paces, doe not finde any ſenſible difference.* This is a crotchet hammered in your own head, but never ſuppoſed by us.

3. Wee grant with you, *That it is preſumption to conclude that to be ſuperfluous, whoſe uſe wee underſtand not*; but yet wee muſt needs ſay, That what is not uſefull at all, is ſuperfluous; as that immenſe and ſtupendious bigneſſe, and incredible diſtance of ſome ſtarres, ſeeing they were made for the uſe of man onely; (for to what other end ſhould they be made?) whereas if they had been neerer and leſſer, they might have been more effectuall: Therefore wee cannot beleeve you that they are of that bigneſſe and diſtance you ſpeak of. And as for other inhabitants, beſide thoſe that are upon this earth, by whom (as you ſay) theſe leſſer ſtars may be diſcerned, I have nothing now to ſay to them; I think you mean your men in the Moon, of whom perhaps I will ſpeak hereafter: and as for theſe ſmall ſtars, which you ſay are lately diſcovered; I grant that they were made for mans uſe, though they be ſcarce diſcernable; for their influence may be great, though their light be ſmall: and we have by them occaſion to ſee how one ſtar differeth from another ſtar in glory, and we may admire Gods greatneſs in the leaſt, aſwell as in the biggeſt; therefore he hath made Flies aſwell as Eagles, and Mice aſwell as Elephants.

9. You chafe as if you had been ſtung with nettles at an argument of mine againſt *Lansbergius*, who held, as you doe, that the Sun was the center: my argument is this; That which is leaſt in a circle ought to be the center of it; but the earth is farre leſſe then the Sun, and the terreſtriall Equinoctiall (*ſecundum te*) according to your owne words, is the leaſt of all the circles, &c. *This* (you ſay) *is ſo ſimple, that every freſh man would laugh at it, and it would make one ſuſpect, that hee who ſhould urge ſuch an argument, did ſcarce underſtand any thing in Aſtronomy.* *Anſw.* 1. For any great skill that either you or I have in Aſtronomy, wee may ſhake hands: A-

ſtronomy is not my profeſſion, yet ſo much I have as is convenient for a Divine, and enough to diſcover your vaine and ridiculous conceits; and I have not the leſſe becauſe of your ſuſpicion: I underſtand ſo much as that I dare ſay. there be many abſurd and fooliſh fancies taught by Aſtronomers, though the ſcience it ſelfe be uſefull in many things. 2. If you, or your freſh men laugh at this argument, you will ſhew that you have little ſalt in you, eſpecially that ſalt whereof the Apoſtle ſpeaks. 3. You ſhewed more malice then knowledge, more ill-will then skill, in repeating my argument; for you left out (*ſecundum te*) that is, *according to your owne words*; which ſheweth that theſe were the words of *Lansbergius*, not mine; to wit, *The terreſtriall Equinoctiall is the leaſt of all circles:* So that you cunningly would derive the ignorance and ſimplicity of your Champion upon mee, whereas I ſpake in his owne tearmes. 4. I did not ſpeak of the earth, as it had relation to the Moon, or *Mercury*, but in reference to the Sun; for I ſay that the earth is leſſer then the Sun, and therefore fitter to be the center then the Sun, as *Lansbergius* would have it. 5. There is no certainty amongſt Aſtronomers, whether the Earth, Moone, or *Mercury*, be the leaſt ſpheare. 6. I ſaid, *minimum in circulo*, not *circuli*; that which is leaſt within the circle, not that which is the leaſt part of the circle. The Moon, and the reſt of the Planets, are the thicker parts of the ſpheares, ſo is not the Earth, it is no part at all of any ſphear, but it is within the ſphears; therefore the Earth, not the Moon, is fitteſt to be the center. Thus you have made mee ſay more now, then I did before. You had no reaſon then to put ſo much vinegar in your ink; but you are a nameleſſe Moon-man wrapt in a cloud:

Cernere ne quis te, ne quis contingere poſſit.

But be not ſo high conceited of your ſelfe; though your habitation be in the Moon, yet learn humility;

Tecum habita, & noris quàm ſit tibi curta ſupellex.

As for the other Objections, which you ſay are not worth the citing, are indeed ſuch as you know not how to anſwer them; therefore you ſlight them, as the Fox did the grapes, which he could not reach.

CHAP. VII.

1. *The Starres have not their light becauſe the Sun is in the center, nor hath the Sun leſſe light being out of it.* 2. *Why the Earth in the center.* 3. *The Sun is not the center, becauſe the Planets move about him.* 4. *The center is not the moſt excellent place, neither*

ther are the beſt things next it or in it. 5. *There is an harmony amongſt the Starres, though the Sun be not in the center.*

IN this Propoſition you ſay, *That the Sun may be the center*; and you tell us of *deformities, wheeles, and ſcrews, as if Nature in framing of the world had been put to ſuch hard ſhifts* by Ptolomie's and Tycho's *Hypotheſis*: But indeed the wheeles, and ſcrewes you ſpeak of, are the whirle-gigs of your own head; and I hope your Creed is, that not Nature, but the God of Nature, framed the world: but let us conſider the weight of your arguments, by which you would prove *Copernicus* his Aſſertion.

1. You ſay, *That the light which is diffuſed in the ſtarres, is contracted in the center, which can onely be by placing the Sun there*: ſo then it ſeemes by you, that if the Sun were not in the center, the light of the ſtarres could not be ſo eminently contained and contracted in the Sun: either you muſt mean that the ſtarres could not receive ſo much light as they doe from the Sun, or elſe that the Sun could not have in himſelfe ſo much light as hee hath, if hee were not in the center: But both theſe are frivolous whimſies; for neither hath any ſtarre its light, becauſe the Sun is in the center, (as you would have) nor would the Sun loſe any of his light, if he were out of the center, no more then a candle can loſe its light, though it be not placed in the midſt of the roome. Now, whether the light of the ſtarres be all one with that of the Sun, or any parcell of it, is not yet fully reſolved. In your next Edition tell us more plainly what you meane by the light in the ſtarres contracted in the center, and wee will give you a more ſatisfactory anſwer.

2. Becauſe *Clavius* and others ſay, *That the Sun was placed in the midſt of the Planets, that hee might the more conveniently diſtribute his heat and light amongſt them; the force of this reaſon* (you ſay) *may more properly prove him to be in the center.* I anſwer, that it will rather prove the Earth to be in the center thus: The Sun is in the midſt of the Planets, that they may the more participate of his light; ſo is the Earth placed in the midſt and center of the world, that the Sun might the more conveniently diſtribute his light and heat to it: for the Sun was made chiefly for the Earth's ſake, and the inhabitants thereof; neither doe the ſtars ſo much need his light and heat as we, without which we can neither live, nor procreate: and as it is queſtionable whether the ſtars receive their light from the Sun, (though the Moon doth) ſo is it much to be doubted that they receive no heat from the Sun, ſeeing *Saturne* is cold; and the Suns heat comes

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by reflexion, which cannot be in the ſtarres.

3. You ſay, *That the Planets move about the center of the world, and that I grant you; but* Saturne, Jupiter, Mars, Venus, Mercury, *move about the body of the Sun*; ergo, *the Sun is in the midſt of the world.* *Anſw.* If you had been better acquainted with the maſter of Syllogiſmes, you had not framed ſuch a lame Syllogiſme as this; for thus it runnes in briefer tearmes; ſome Planets move about the center of the world, ſome Planets move about the Sun; *ergo*, the Sun is the center of the world. Beſides, that it conſiſts all of particulars, the concluſion is falſly inferred againſt the lawes of the third figure; for it ſhould be formed in the firſt figure thus: What moves about the Sun, moves about the center of the world: the Planets move about the Sun, *ergo*, they move about the center of the world; and all this I grant you, that the Planets move about the earth which is the center: now then I hope you will not ſay that the Sun is the center of the world, becauſe the Planets move about him; no more then *Jericho* was the center of *Canaan*, becauſe the Prieſts went about it.

4. When you tell us that the revolution of *Venus* and *Mercury* is about the Sun, becauſe they are never at any great diſtance from him, and alledge a cauſe fit to be laughed at; for is the vicinity of one ſtarre to another, the cauſe of its revolution about that ſtarre? becauſe the mill-wheele is not farre diſtant from the miller, doth it therefore goe about the miller?

5. The reaſon which you alledge from *Pythagoras* is alſo weak, for though the ſunne in reſpect of his light were the moſt excellent body, and the center the moſt excellent place, yet it will not follow that he is there; for we ſee that the moſt excellent creatures are not placed ſtill next the center or in it, but fartheſt from it: as man is placed in the ſuperficies or circumference of the earth, and not in the center of it: the heart is not in the midſt of the body; if the middle or center were alwayes the fitteſt place for a luminous body, God would have commanded *Moſes* to ſet the candleſticke with the lamps in the midſt of the tabernacle, and not in the ſide of it: our eyes had beene placed in our navels, not in our heads. And albeit *Plato* ſay, that the ſoule of the world reſides in the innermoſt place of it, yet I hope you doe not by this underſtand the ſunne; and you did well to alledge *Macrobius* againſt your ſelfe, in comparing the ſunne in the world, to the heart in a living creature; for as the heart is not in the center of the body, neither is the ſun in the cen-

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ter of the world. But you give us a profound reaſon why in living creatures the chiefeſt part is not alwayes placed in the midſt, *becauſe they are not of an orbicular forme as the world is*; then it ſeems that the outward figure is the cauſe why the beſt part is not placed in the midſt. What thinke you of a Hedge-hog when he wraps himſelfe up in his prickles as round as a bowle, is the beſt part then more in the middle of his body then it was before? Or hath the earth which is of a round forme better things in the center then in the ſuperficies? What difference is there betweene the middle and out-ſide of a round ſtone? Againe, you ſay, the center is not the worſt place, although *Ariſtotle* proves it from the dignity of the thing containing over that which is contained; and your reaſon is, *That though the center be contained, yet it is one of the* termini *or limits of a round body, as well as the circumference:* but I reply, that though it be one of the limits, yet it is contained, and therefore more ignoble then that which containeth it; ſo you have but offered to anſwer this argument, and indeed you know not how to anſwer it.

6. *If we ſuppoſe the ſunne to be in the center* (ſay you) *we may conceive an excellent harmony, both in the number and diſtance of the Planets.* For my part I give you leave to conceive what you w , ſo that you doe not obtrude your conceits on us as oracles, will keep them to your ſelfe; if you continue to divulge them, we will conceit that your conceits are but idle phanſies, if you cannot ſet them forth with better proofes then as yet you have done. We are confident the earth is in the center, and doe conceive that there is an excellent harmony in the Planets, though the ſunne be not in the center; and therefore to ſay that the harmony would be diſturbed if the ſunne were amongſt the planets, you wrong both *Pythagoras* your maſter, whoſe conceit of the muſicall harmony in heaven was grounded on the motion of the Planets; and injurious to *Apollo* himſelfe the author of muſicall harmony, and the continuall companion of the Muſes, without whom there can be no conſort.

CHAP. VIII.

1. *How the eye is deceived, and how not; and that if the earth moved, we ſhould ſee it.* 2. *Motion and reſt how the obiects of the eye, and of the common ſenſe.* 3. *If the earth moved, the clouds would but ſeeme to move as well as the ſunne.* 4. *How the eye can be deceived in the motion of a lucid body.* 5. *The naturall motion of the foundation cannot keep buildings from falling.* 6. *The heavens fitter for motion then the earth.* 7. *Rugged bodies not fitteſt for motion.* 8. *The ſight hindred by the motion of the ſubject, medium, and obiect.* 9. *One ſimple body hath but one naturall motion, proved.*

10. Eſſentiall properties more chiefly in the whole then in the parts, the earth is heavy in its owne place how, lightneſſe how a hinderance to motion, of the earths ineptitude to a ſwift motion. 11. The magneticall qualities of the earth, a fiction. 12. Similitudes no proofes; the seas ebbing and flowing, what. 13. The whole earth moveth not, becauſe the parts move not round. 14. Abſurd phraſes; and the ſpots about the ſunne, cenſured. 15. That the earth turnes about the moone is ridiculous. 16. Some obſervations to prove that the earth turnes about the clouds, refuted. 17. Of a mixed motion, of the place, medium, and ſpace. 18. Of the motion of comets. 19. My nine arguments defended. 1. That the earths motion would make it hot. 2. The aire purer. 3. A ſound. 4. Heaven hath all things fit for motion. 5. Of ſimilar parts and the whole. 6. The ſunne is the heart of the world. 7. It workes by motion. 8. The earth is the firme foundation. 9. The authority of Divines; the heaven called Æther; the earth hath not two diſtinct motions.

THe chiefe buſineſſe of this Chapter (you ſay) *is to defend the earths diurnall motion.* Indeed you are too buſie; *Non omnium diligentes*: neither is this buſineſſe of yours any thing elſe then idleneſſe, *otioſi negotium.* And becauſe you cannot anſwer our objections, you are as buſie here as you can be to illude them, and to delude the world with your great brags & Rhodomontado's; but let us ſee with what dexterity you diſſipate the ſtrength of our arguments; you doe as *Cacus* did to *Herculus*, *Cacus* being too weake to reſiſt that invincible champion, laboured to eſcape his hands by darkning the cave, and *Herculus* his eyes with ſmoake and aſhes which hee belched out againſt him: the like ſtratagem you uſe with intricate words and ſmoakie phraſes to darken the underſtanding of the Reader.

1. We objected, that if the earth did move we ſhould perceive it; you anſwer (but in many intricate and ambiguous tearms which were tedious to relate) *That the ſight judges of motion deceitfully; your reaſon is, becauſe motion is not the proper object of the ſight, nor belonging to any other peculiar ſenſe: and that the common ſenſe apprehends the eye it ſelfe to reſt immoveable, as when a man is carried in a ſhip. Anſw.* The ſight is oftentimes deceived, either in reſpect of the diſtance of the object, ſo the ſtars appeare leſſe then they are; or in reſpect of the agitation of the object, ſo a ſquare thing ſeemes round being ſwiftly turned about. 2. In reſpect of the indiſpoſition of the medium, and ſo the Planets riſing and falling ſeeme biggeſt, the aire being thickned. 3. In reſpect of the organ, when the eye, optick nerves, or viſive ſpirits are diſturbed, vitiated, indiſpoſed, or agitated, and ſo things that reſt ſeeme to move, becauſe the eye moveth; for that apparent motion is not the object of the eye, as a true motion is,

but

but as it were the effect of the eye moved. So then, tell us the cauſe why we cannot perceive the earth move, ſeeing it moves with ſuch a ſtupendious ſwiftneſſe? You cannot ſay that the diſtance of it, nor the indiſpoſition of the medium are the cauſes; the eye then muſt be the cauſe. But are all mens eyes from the creation till now ſo diſturbed, or agitate with an inſenſible motion, that they cannot perceive the earth nor any part of it to move, and yet doe perceive the ſunne to move? What? will you make God ſo defective in his work of mans body, as to give him ſuch eyes which ſhal continually delude him; neither ſhall they ever apprehend their object, though never ſo neere; or the medium, though never ſo well diſpoſed? Or will you make him ſo envious, as to give us ſuch eyes, by which we ſhould receive the knowledge of viſible objects, and yet cannot ſee them when they are ſo neere us? This is the curſe of the Sodomites, who could not ſee *Lot's* dore though they were cloſe by it. Your ſimile of the ſhip will not hold; for though it be true that the ſhore apparently moves when the ſhip removes, yet we ſee and feele the true motion of the ſhip, as well as we ſee, or rather ſeeme to ſee the apparent motion of the ſhore. When I have beene in a ſhip, I have obſerved by looking on the maſt how ſwiftly it is moved from the ſhore; but being on the ſhore, and looking upon trees, I ſee no other motion in them then what is cauſed by the winde. When I am in a ſhip, I perceive the motion of the other ſhip that ſaileth by me, though the motion of both be equall and uniforme: but when I am in an Iſland, I can neither perceive the motion of it, nor the motion of the other Iſland that is by it. And although the motion of the eye makes a thing ſeeme to move which doth not move, yet it doth not make the thing ſeeme to move which doth really move, if it be within diſtance: for being in a ſhip I have diſcerned the running of horſes and carts upon the ſhore really, though the ſhore it ſelfe moved apparently; therefore, though I ſhould yeeld that the earth did move, yet that motion could not make me thinke that the ſun did not move really, no more then the motion of the ſhip can hinder me from diſcerning the true motion of a horſe or wheele on the ſhore; and albeit, motion be not the proper object of the eye, yet it is an object; neither is the eye more deceived in apprehending or receiving the ſpecies of motion, then it is in receiving the ſpecies of colours, *cæteris paribus*: the action of the eye, or paſſion which you will, being no other towards the motion of a coloured object, then towards the colour of a moving object. Againe, it would be

earth (as you call it) and the violent motion of a ſhip produceth the ſame effect in our eye; as becauſe the moving of a ſhip makes the ſhore ſeeme to move, therefore the moving of the earth makes the ſunne ſeeme to move.

2. Your words ſeeme to be contradictory when you ſay, *That motion is not the proper object of the ſight, nor belonging to any other peculiar ſenſe.* We ſay that colours are the proper object of the ſight, becauſe they belong not to any other peculiar ſenſe, and that motion is not the proper object of the eye, becauſe it doth belong to other peculiar ſenſes: but your other words are falſe, when you ſay, *That the common ſenſe apprehends the eye it ſelfe to reſt immoveable.* For when the eye is moved, the common ſenſe apprehends it to be moved; and ſo when it reſts, the common ſenſe apprehends it to reſt; otherwiſe, it and the imagination ſhould be ſtill deceived. But when you ſay, *That the eye is an ill judge of naturall ſecrets*, you ſhould have ſaid, That it is no judge of naturall ſecrets; for the viſible workes of nature are no ſecrets; natures ſecrets are inviſible, and therefore are judged by reaſon, not by ſenſe. Now, though this be a good conſequence, the earth doth not move, becauſe it doth not appeare ſo to us, yet this conſequence will not hold, the earth doth move, becauſe it appeares to move: for an object that is immoveable may ſeeme to move, becauſe the eye is moved; but when we ſee a great body neere us, (to ſtand ſtill), wee juſtly inferre that it moveth not, becauſe we ſee it not. For the apparent motion of the ſhore, there is a manifeſt cauſe, but for the apparent reſt of the earth there can be no cauſe; for if it did move it would not ſeem to reſt, being there is no cauſe, not ſo much as imaginable of this ſuppoſed reſt, but rather the contrary; for if it did move, it and all things elſe would ſeeme to move: as for the apparent bigneſſe of the ſunne and moone, I have already told you a reaſon, but you have not, nor can you tell mee a reaſon for the apparent reſt of the earth.

L. 1. ſect. 1. c. 1. 2. I objected, That if the motions of the heavens be onely apparent, that then the motion of the clouds would be ſo too: your anſwer is, *That I might as well inferre, that the ſenſe is miſtaken in every thing, becauſe it is ſo in one thing.* *Anſw.* You ſhould have rather inferred, that as the ſenſe is miſtaken in one thing, ſo it might be in any other thing; but I will ſtand to your illation, the ſenſe is miſtaken ſometimes in every thing, when it is miſtaken in one thing of the ſame kinde: the eye is miſtaken in the bigneſſe of one ſtar,

and

and ſo it is in the bigneſſe of every ſtar, becauſe the reaſon or cauſe of the miſtake is alike in all, to wit, the diſtance. The eye is miſtaken in the motion of one tree or houſe upon the ſhore, and ſo it is in all the trees and houſes it ſeeth on the ſhore; for the reaſon of this miſtake is alike in all, to wit, the agitation of the eye: even ſo if the heavens move apparently, the clouds alſo move apparently; *Nam in horum motu poteſt decipi viſus, non minus quam in motu cœlorum:* theſe are my words which you cunningly left out. The eye is deceivable in the one as well as in the other, therefore, my eye being alike diſpoſed (in reſpect of its agitation, by the ſuppoſed motion of the earth) to the heavens, and to the clouds, it will follow, that as it is miſtaken in the one, ſo it is in the other; and conſequently wee muſt no more truſt our eyes in the motion of the clouds, then in the motion of the heavens, if the earth did move. Therefore, what you ſpeake of *Anaxagoras* his opinion concerning the blackneſſe of the ſnow, is fit for your ſelfe: for to hold the ſnow to be blacke, and the earth to move, are both alike abſurd and ridiculous; but this opinion is more dangerous then that. As for your conceit of the common ſenſe, conceiving the eye to be immoveable, I have ſaid already that it is falſe, and indeed the opinion of one that ſeems to want common ſenſe; and as boldly without proofe doe you affirme, that the clouds, though they ſeeme not to move, are carried about with our earth by a ſwift revolution; for ſo you make the inferiour bodies againſt that order that God hath placed in the world, to move the ſuperiour: as if you ſhould ſay, The foot originally moves the head, and not the head the foot. *But this is no hinderance* (you ſay) *why we may not judge aright of the other particular motions.* It is true, I judge aright of the particular motions of the clouds, when I ſee them carried to and fro by the winde, and ſo I judge aright of the motion of the ſunne; but when I ſee the ſun and a cloud moving from Eaſt to Weſt, and you ſhould tell me that the ſunne doth not move, though the cloud doth move, I would know the reaſon why my eye ſhould be more deluded in the one then in the other; ſeeing the motion of the earth, and ſo of my eye, is alike diſpoſed to both. It is as much as if you would tel me, when I ſee a horſe and a man run both on the ſhore, that the man runs, but not the horſe, whereas my eye is alike diſpoſed to both. *As for your ſimilies of a man walking in the ſhip, and of the moving of the oares, they will not hold:* for it is true, that though the banks ſeeme to move, yet it will not follow that my friend doth but ſeem

L. 1. ſect. 1. c. 1.

to walke, or the oares ſeeme to move, when as they move truely; the reaſon is, becauſe the motion of the ſhip is no hinderance to the ſight of that motion of my friend, or of the oares, being ſo neer to my eye; although that ſame motion of the ſhip is a hinderance both to the ſight of the earths ſtability, as alſo of the motion of ſuch things as be afar off: for a horſe a great way off on the ſhore running, will ſeeme to me a buſh moving with the trees and bankes; even ſo the motion of the earth may as well delude my eye in the moving of the clouds, as of the ſunne.

3. I ſaid that the eye could not be ſtill deceived in its ſight or judgement of a lucid body, which is its prime and proper object; Your anſwer is, *That the deceipt is not concerning the light or colour of theſe bodies, but concerning their motion, which is neither the primary nor proper object of the eye. Anſw.* The motion of the ſunne as you take it, is no wayes the object of the eye; for it is *non ens* in your opinion: What is apparent, is not, *quod videtur non eſt*; a ſeeming motion is no motion, and therefore no object. 2. I ſaid that a lucid body was the eyes object, the light it ſelfe, *objectum quo*, or the cauſe that bodies are diſcernable by the eye: now what probability is there, that the eyes which were made to looke upon theſe lucid bodies, ſhould be ſtill deluded, or can be, ſeeing their motion is rather the object of the eye, then their light, as is ſaid? albeit motion be a common object, I ſee their motion, I ſee their lucid bodies, but their light I ſee not properly: their light is the cauſe or meanes by which, but not the *objectum quod*, or thing that I ſee.

4. We ſay that our high buildings would be hurled down if the earth did move: You anſwer, *That this motion is naturall, and therefore regular, and tending to conſervation. Anſw.* Earth-quakes are naturall motions, which neither are regular, nor tend to conſervation: the motion of windes, haile, raine, thunder, &c. are naturall, and yet doe much hurt; therefore, the naturality of the earths motion cannot preſerve our buildings from falling. But you ſay, *If a glaſſe of beere may ſtand firmely in a ſhip, moving ſwiftly, much leſſe will the naturall and equall motion of the earth cauſe any danger in our buildings. Anſw.* There is no proportion betweene a glaſſe of beer and a high building, nor is there between the motion of a ſhip and of the earth; for the ſhip moves upon the plaine ſuperficies of the water, being carried by the winde or tide: the earth moves circularly and with an incredible celerity, as your ſide ſay. You ſhould compare the earths motion, to the motion of a wheele or great globe,

and

and then ſet your glaſſe of beer upon it whilſt it is whirling about: but you need not feare the fall of your high buildings though the heaven whirle about, except you meane to build caſtles in the aire, or to raiſe your houſe as high as the tower of Babell; I thinke your buildings in the moone cannot ſtand upon ſuch a whirling foundation.

5. I perceive by your Interjection *ha, ha, he*, that you are a merry gentleman, indeed you cannot anſwer for laughing; but, *Per riſum multum, &c.* I doubt me you are troubled with a hypochondriacke melancholy, or with the ſpirit of blinde *Democritus*: take heed of *riſus Sardonius*. But let us ſee what it is that tickles you. I had ſaid, that though this circular motion of the earth were naturall to it, yet it was not naturall to townes and buildings, for theſe are artificiall: To this you anſwer not but by your interjection of laughter, which is a very eaſie way to ſolve arguments, and ſo fooles will prove the beſt diſputants. I hope you doe not thinke that townes and buildings are naturall bodies, or that the motion of the earth is naturall to them; and if you thinke that artificiall things are priviledged from falling, by the naturall motion of a naturall foundation, you ſpeake againſt reaſon and experience; for a ſhip is not priviledged from ſinking, becauſe the foundation on which it is carried moves naturally; and high buildings muſt needs be weakned by motion, let it be never ſo equall and regular; hee that thinkes otherwiſe deſerves to be laughed at. I have read of moving Iſlands, but without buildings, you were beſt goe build there.

6. I ſaid, that the aire could never be quiet about us, but that there would be a continuall and forcible motion of it from Eaſt to Weſt, if the earth did move with that celerity you ſpeak of; to this you anſwer, *That the aire is carried along with the ſame motion of the earth*: But this will not help you, for the carrying of the aire about with the earth, cannot hinder the forcible motion of it, nor can we be ſo ſenſeleſſe as not to feele it. Doth not the whirling about of a great wheele move the aire about it? and if you ſtood by, you ſhould feele it. But you are very witty in your words following, *If the motion of the heaven* (ſay you) *which is a ſmooth body be able to carry with it a great part of the three elements, &c. much more may our earth which is a rugged body be able to turne the aire next to it.* You ſhould rather ſay, If the earth which is but a ſmall, dull, low, and heavy body, can carry the aire about with it, much more may the

the heavens doe this, which are vaſt, agil, active, and high bodies: for we finde that the ſuperiour bodies are more apt to work upon, and to move the inferiour, then to be moved by the inferiour: as the inferiour parts of the little world of mans body are moved by the head, ſo it is in the great world. Againe, the heavens in reſpect of their agility, activity, ſubtlety, come neerer to the nature of ſpirits, then the earth, which is a dull, heavy, lumpiſh body, not apt to be moved, much leſſe to move. Is it the earth that moves the aire, or the aire that moves the earth in earth-quakes? Is it the earthy and heavy part of mans body that moves theſe aereall ſubſtances in the nerves, which we call animall ſpirits? Or are not theſe rather the movers of our groſſe bodies? Your argument is juſt ſuch another as this; if the winde or aire be able to move about the weather-cocke, much more may the tower or ſteeple which is a rugged body move it: But that rugged bodies are more apt to move, or to be moved, then ſmooth bodies, I never heard before. I have obſerved that the ſmoother the bowle is, the ſwifter it runneth; why did *David* chooſe five ſmooth ſtones to ſling, if rugged ones were apter for motion? When you would have your maid make you ſome muſtard, give her a rugged diſh, and a rugged bullet, and tell her that theſe are apter for motion; ſhe will preſently entertain this new Philoſophie with your interjection, *ha ha he:* ſo when you ſay that a rugged body carrieth more aire with it then a ſmooth; you meant perhaps the bodies of Satyrs, or of the wilde Iriſh in their rugges. But now diſtruſting your rugged conceit, you flie to the earths magneticall vertue, whereby it can make all things neer unto it, to obſerve the ſame revolution: this is a farre fetched ſhift, and a ſtrange property of the *magnes*; did you ever know a loadſtone move any thing except iron or ſteele, or to move it ſelfe circularly, and to make all things neere to it, to obſerve the ſame revolution; that theſe conceits are,

Non ſani hominis, non ſanus juret Oreſtes.

L. 1 ſect. 1. c. 5 7. I ſaid, That when the man or ſubject, the medium, and the object were all moved, the ſight was hindered that the eye could not exactly judge of any thing. You anſwer, *That it's true where be ſeveverall motions, but when the ſubject, medium, and object, are all carried with the ſame equall motion, there is no impediment in the act of ſeeing.*' But this is a meere ſhift of yours; for though the motion be equall in all, yet the ſight will be hindered. Sit downe in a turning chaire, or on a turning table, take a booke in your hand, and ſpectacles

cles on your noſe, and let me turne you about, the motion ſhall be equall in all three, but I doubt me you will read ill-favouredly. your inſtance of reading in a ſhip is nothing; for the ſhip moves ſometimes ſo ſlowly that it is ſcarce diſcernable: but let a ſhip or coach move ſwiftly, and you ſhall not read diſtinctly. If a ſhip ſhould move foure miles in a minute as you ſay the earth doth, you ſhould ſcarce ſee the booke in which you read, much leſſe the letters.

8. I ſaid out of *Ariſtotle*, That one ſimple body had but one naturall motion, as the earth to deſcend, the aire to aſcend, and therefore could not have a circular motion. You anſwer, *That theſe right motions belong onely to parts of the elements, and that too when they are out of their proper places.* Indeed you ſhew your ſelfe a weake Philoſopher, for from whence have the parts of the earth their motion of deſcent, but from the whole? Doe you not know that old and triviall maxime: *Propter quod unumquodque eſt tale, illud ipſum eſt magis tale?* If your hand be heavy, much more heavy is your whole body; if a part of the ſea be ſalt, much more ſalt is the whole. 2. When you ſay that the elements have theſe motions, onely when they are out of their owne places; if you meane of the act of aſcending and deſcending, you ſay true; but if you meane of the power or naturall poſſibility, you are deceived: for though they bee in their proper places, yet this naturall power of theſe motions is not taken from them. 3. When you ſay that a load-ſtone, in reſpect of its matter and condenſity naturally tends downward; you doe againe bewray your ignorance in Philoſophy, for gravity is the cauſe of deſcent, not matter and condenſity; for the ſtars have matter and condenſity, and yet they neither can, nor do deſcend. 4. When you ſay, that the load-ſtone which is a heavy body, and naturally tends downward, may naturally move upward, you ſhew your ſelfe more and more abſurd; for beſides that it is repugnant to the Maxime above ſaid, for a ſimple body to have two contrary motions, ſo it overturns the naturall properties of the elements: for if heavy bodies may naturally aſcend, then light bodies may naturally deſcend; and ſo we ſhall not know how one element differs eſſentially from another; and conſequently the deſcending of fire of old upon the ſacrifices, and the aſcending of *Elias* his body into heaven, were not miracles, but naturall motions. 5. That deſire of union and coition which one load-ſtone hath with another, by which it breaks the laws of Nature, is but your conceit: if one load-ſtone draw another, or if it draw yron upward, that aſcent is no naturall motion, but in

ſome ſort is a violent attraction: therefore *Ariſtotle's* Maxime remaines firme, that one ſimple body hath but one naturall motion, and conſequently the earth doth not naturally move round.

9. We hold, that the gravity and magnitude of the Earth makes it unfit for ſo ſwift a motion. Your anſwer is, *That heavineſſe can onely be applied to theſe bodies which are out of their proper places, or to ſuch parts as are ſevered from the whole.* To this wee have partly anſwered already, that the eſſentiall properties of ſimple bodies are in the whole principally, and in the parts by reaſon of the whole. 2. It is falſe that heavy bodies are not heavy in their proper places; for they loſe not their eſſentiall qualities by being in their places. Is a mill-ſtone leſſe heavy when it is on or in the ground, then when it is raiſed from the ground? Put to your hand, and trie if you can with more eaſe wagge it upon the ground, then when it is raiſed ſome paces above it. 3. When you ſay, *That the globe of the Earth in its right place cannot truly be called heavy*: I ſay the contrary, that it can never be more truly called heavy, then when it is there; for if it were not heavy there, it would not be there: it is in its owne place becauſe it is heavy, if it were poſſible to remove it from its place, it would never reſt till it returned thither, becauſe its heavineſſe would not ſuffer it to reſt in any other place but in its owne, which is the loweſt place fit for ſo heavy a body. 4. When you ſay, *That in it, and in the reſt of the Planets there is an ineptitude to motion by reaſon of the matter, and condenſity of their bodies*; you know not what you ſay: For if there be no naturall aptitude to motion in the Planets, and in the earth, that motion muſt be violent or preternaturall. Why is the motion of the fire downward, and of the earth upward, violent motions, but becauſe theſe elements have no aptitude to ſuch motions? 5. When you make the matter the cauſe of this ineptitude, you know not the grounds of naturall Philoſophy; for it is the matter that gives the aptitude, as the forme gives the act. 6. You ſay, *That Nature may endow the earth with a motive faculty, proportionable to its greatneſſe, as ſhee beſtowes ſpirits upon other creatures* (for inſtance, an Eagle and a Flie,) *proportionable to their ſeverall bodies.*

Sic parvis componere magna ſolebas:

There is indeed ſo me proportion between an Eagle and a Flie; but between an Eagle, and the vaſt body of the earth, there is none at all. If you had compared the motion of the Eagle, to the motion of the great bird *Rue*, you had ſpake within compaſſe: If one

ſhould

ſhould ſay that a little wheele, and a great mill-ſtone may be moved according to the proportion of their bodies: ſo likewiſe may the hill *Athos* or *Atlas* be turned about, he would be counted ridiculous: and yet there is a farre greater proportion between a mill-ſtone and thoſe hills, then between an Eagle and the Earth. 7. *Though the magnitude of the earth make it incapable of ſo ſwift a motion, yet this doth not make the heaven much more incapable,* as you ſay: For it is the magnitude joyned with the heavineſſe of the earth, that makes it incapable of ſuch a motion: but the heavens are not heavy, though great. A cloud which may be a mile or two about, hath a greater magnitude then a pebble ſmall ſtone; and yet you ſee with what facility the cloud is carried, whereas the ſtone is not moved, (though it were high in the air) but with the motion of deſcent. 8. As for the ſwiftneſſe of the earth's courſe, which *exceeds not* (you ſay) *the celerity of clouds driven by a tempeſtuous winde; of a cannon bullet which in a minute flies foure miles, &c.* Theſe (I ſay) are the phanſies of a craſie braine in a dream: you are the onely darling and favourite of Nature, who both knowes the Earth's motion, and how much it can runne in a minute. It ſeemes this incredible ſwiftneſſe of the earth hath made your head giddy, that you know not what you write: and how can it be otherwiſe? for if you be carried 240. miles in an houre, and your pen whilſt it is forming almoſt every letter foure miles in a minute, your braines flie as faſt as the bullet out of the cannon: If this be true, I doe not think that either you know what you write, or where you are, nay you could not write at all; nor were it poſſible for you to live, or for your lungs and heart to move, or draw breath.

Your ſubſequent diſcourſe of the Earths magneticall property is grounded (as indeed all your Book) upon ridiculous ſuppoſitions; and on ſuch grounds do you raiſe the ſtructure of your Babel or bables. 1. *You ſuppoſe that the lower parts of the Earth do not conſiſt of ſuch a ſoft fructifying ſoyl as in the ſurface, becauſe there is no uſe for it.* But what if I ſhould ſuppoſe the contrary, that it doth conſiſt of a fructifying ſoyle, and that there be people there, aſwell as in your Moone? I doubt not but I could prove it with as good reaſons as you do your world in the Moon. 2. *You ſuppoſe it conſiſts of a hard rockie ſubſtance, becauſe theſe lower parts are preſſed cloſe together by the weight of the heavy bodies above them.* What if I ſhould ſuppoſe the contrary, that the ſofteſt ground is in the loweſt parts, as being fartheſt from the Sun which hardneth the earth; therefore they that dig deep in-

to the bowells of the earth, finde it ſtill ſofter and ſofter the deeper they goe: And wee know that many fruits and heavy bodies are hard and ſtonie without, but ſoft within; the earth then is not like a cheeſe that by preſſing groweth hard. 3. *You ſuppoſe that this rockie ſubſtance is a load-ſtone.* But what if I ſhould ſuppoſe it to be a diamond, which is more likely; both becauſe it is the more precious ſtone, and Nature commonly layeth up the moſt precious things within her moſt inward parts; and becauſe it is harder, for according to your doctrine, the preſſing cloſe of heavy bodies is the cauſe of hardneſſe. 4. *It's probable* (you ſay) *that this rockie ſubſtance is a load-ſtone, becauſe the earth and load-ſtone agree in ſo many properties.* What if I ſhould ſay that they diſagree in many more properties, and that therefore this cannot be the load-ſtone? But what an Argument is this? the earth and loadſtone agree in many properties, therefore the lower part of the earth conſiſts of load-ſtones: as if you would ſay, A man and an horſe agree in many properties, therefore the lower part of a man conſiſts, or is made up of a horſe: or thus, The elementary and our culinary fire agree in many properties, therefore the inmoſt or lower part of the one conſiſts of the other. 5. You ſay well that what hath all the properties of the load-ſtone, muſt needs be of that nature; but becauſe you are not well read in the Maſter of ſyllogiſmes you inferre that the inward parts of the earth conſiſt of a magneticall ſubſtance, which is the concluſion without an aſſumption, which ſhould have been this: but the lower parts of the earth have all the properties of the load-ſtone, which wee deny. Now let us heare how you prove it; *The difference* (you ſay) *of declination and variation in the mariners needle cannot proceed from it ſelfe, being the ſame every where; nor from the heavens, for then the variation would not be ſtill alike in the ſame place, but divers according to the ſeverall parts of heaven, which at ſeverall times happen to be over it; therefore it proceeds from the earth, which being endowed with magneticall affections, diverſly diſpoſeth the motions of the needle.* I anſwer, the Earth may have a diſponent vertue to alter the needle, and yet not be a load-ſtone; ſo the heavens are the cauſes of generation, corruption, alterations, &c. in the world, and yet they are not capable of theſe qualities: the Moon cauſeth the ſea to ebbe and flow, doth ſhee therefore partake of the like affections? or hath ſhee the properties of the ſea? The load-ſtone diſpoſeth the motions of the yron, will you therefore inferre that the load-ſtone hath the properties of yron? 2. If the variation, as you ſay,

of

of the needle be divers, according to the ſeverall parts of heaven paſſing over it; it muſt follow, that the needle muſt vary every minute and ſcruple of an houre, even here where we live; ſeeing every ſcruple or minute divers parts of the heaven are ſtill paſſing over it. 3. If the inclination or motion of the needle towards the North, is cauſed by the heaven, not by the earth; why ſhould not the variation and declination of it be cauſed by the heaven likewiſe?

You are driven to hard ſhifts, when you are forced to flie to ſimilitudes for want of proofs, to ſtrengthen your weak and abſurd aſſertions; for ſimilitudes may illuſtrate, they cannot prove. 2. Becauſe you cannot ſhew any ſimilitude of the earth's motion with ſuch things as you are acquainted, you are forced to borrow ſimilitudes from thoſe things with which you are not acquainted, rather then you will ſeeme to ſay nothing. You flie beyond the Moon, *Saturne* and *Jupiter* muſt ſerve you at a dead lift, but I know not upon what acquaintance. This is your conceit: *A bullet, or any part of the earth, being ſevered from the whole, obſerves no leſſe the ſame motions, then if they were united to the whole: whereas* Jupiter, Saturne, *&c. doe conſtantly and regularly move on in their courſes, hanging in the etheriall aire.* But firſt tell us if *Jupiter* and the reſt are ſeparated from the whole; if they be, what is it that moves them with contrarie motions? If they be not, then your ſimile hath never a foot. Againe, doth this follow: *Jupiter, Saturne,* &c. have ſuch and ſuch motions; therefore bullets and parts of the earth being ſeparated, obſerve the motion of the whole? You had been better to have brought your ſimile from the ſea, which is neerer to the earth in place and nature then the heavens are; thus: The ſea ebbs and flowes, therefore parts of the earth being ſeparated, may obſerve the motion of the whole. Doth not this hang well together like a rope of ſand? If you had told us that parts of the ſea being ſeparated, obſerve the motion of the whole in ebbing and flowing; therefore parts of the earth ſeparated, obſerve alſo the motion of the whole, you had ſaid ſomething; but you know the contrary of the Antecedent to be true; for you tell us that a bucket of ſea water doth not ebbe and flow, though this motion be (as you ſaid) naturall to the ſea: But here you are deceived; for if this motion were a naturall property flowing from the eſſence of the ſea, the whole ſea, and every part of it ſhould ebbe and flow; but it is not ſo, for the Adriatick ſea hath this motion; the Tyrrhene, Baltick, and ſome other ſeas have it not; ſo ſome parts of the ſea ebbe and

flow more and longer then others; but eſſentiall properties are not capable of more and leſſe; ſome thinke that this is no pure motion, but an alteration rather in the ſea: but be it what it will be, it proceedeth not from the nature of the ſea, but from externall cauſes; partly from the force and motion of the ſtars, chiefly of the moon; and partly from vapours and exhalations in the ſea.

12. You ſay, *The whole earth may move round, though the ſeverall parts thereof have no ſuch revolution particular of their owne; for there be many things agreeing to the whole frame, which are not diſcernable in the divers parts of it, which you inſtance in the ſea water, and in the bloud and humours of our body, which aſcend in the body, but deſcend, being ſeparated from it.* *Anſw.* There is nothing proper and eſſentiall to the whole, but is alſo proper and eſſentiall to the parts ſeparated or not ſeparated; thus if circular motions were naturall to the whole earth as you ſay, the parts of it would retaine their nature ſtill though ſeparated: therefore every part of the earth deſcends, becauſe the whole doth, but no part thereof moves circularly, becauſe the whole doth not. As for the parts of the ſea water in a bucket, there is not ebbing and flowing as in the whole; becauſe that motion is not naturall to it, nor doth it proceed from the active forme, but from its paſſive, whereby it is apt to receive ſuch a motion from externall agents: that motion which is eſſentiall and naturall to it, is not loſt in the parts, being ſeparated; for every bucket, yea, every drop of ſea water deſcends, becauſe that motion is naturall, therefore not ſeparable. As for the bloud and humours in our body, which you ſay aſcend naturally to the head, I ſay, they aſcend not naturally, for naturally they deſcend, becauſe heavy; but they are carried upward by the ſpirits in them, and drawne up by the attractive faculty, for each part drawes its aliment: now this bloud and humours being ſeparated from the body, loſe their heate and ſpirits, and ſo deſcend. Your inſtances then will not evert our maxime, to wit, that if the whole earth move circularly, the ſeparated parts would retaine the ſame motion: but you ſay that this motion is not diſcernable in the parts; I grant it, neither is it diſcernable in the whole; and ſeeing it is neither diſcernable by the ſenſe, nor demonſtrable by reaſon, how come you to know it? if you can perceive in the ſwift violent courſe of a bullet, the magneticall revolution of the whole earth, you are more quick-ſighted then *Lynx*.

You have certaine phraſes like riddles, which ſtand in need of ſome

ſome *Oedipus* to explaine them. 1. *You call the earth a great magnet*; What's that? A great load-ſtone? If there be great ſtore of iron in your moone world, this great magnet in time may draw down the moone upon us. 2. You ſay, *That parts of the earth may according to their matter be ſevered from the whole*: perhaps you meane they may be ſevered in reſpect of place, not of matter; for if they have not the ſame matter with the whole, they cannot be parts, nor can they be the ſubject of theſe common magneticall qualities you ſpeak of. 3. You ſay, *That Jupiter and Saturn hang in the etheriall aire*: you love to confound what our wiſe fore-fathers have diſtinguiſhed, becauſe you have an etheriall earth in the moon, you would fain have an etheriall aire to: God hath ſeparated the heaven or etheriall region from this aereall, ſo muſt we. I have read once of *aura atherea* in *Virgil*, but there the Poet divinely meanes our breath which wee have originally from heaven; I know no other etheriall aire but this. 4. You ſay, *That the fleſh, bones, &c. tend downward as being of a condenſate matter*: but gravity is the proper cauſe of deſcent, and not denſity; for the fire and aire may be condenſate, and yet tend upward. 5. You ſay, *That Saturne, Jupiter, and the Sunne, are magneticall bodies*: If you meane that theſe ſtars have the eſſentiall properties of the *magnes* to draw iron, then you wil make the earth and Planets to be of the ſame kind and ſpecies: if *Mahomet's* iron cheſt were hanged between the ſun and the earth, it's a queſtion whether it ſhould be drawne more forcibly upward or downeward. 6. You aske a reaſon, *Why the earth ſhould not move about its center as the Planets doe*: I may rather aske you why it ſhould, ſeeing it was made for reſt, and they for motion; neither is there any thing wherein they agree, but that they are corporeall ſubſtances, in all things elſe they differ: why then ſhould wee inferre the earths motion from their motion? 7. You that prove nothing, but boldly ſayes any thing, as if men were bound to receive your dictates though never ſo unreaſonable and ridiculous, as if they were oracles; you I ſay tell us, *Of ſpots about the ſun, thought to be clouds or evaporations from his body*: If your eagle eyes can ſee ſpots about the ſun, then the heavens are not pure in your ſight; but who hath ſpotted them which God hath made cleare and pure without ſpot or wrinkle? are not the ſpots in your glaſſe, or in your eye rather? I have heard of one who with his ſpectacles, reading in a booke, beat the booke three or foure times, thinking he had ſeen a flye on the paper, when it was a ſpot in his glaſſe. If you had read the abſurd opinion of the

the *Manichees*, who held with as great confidence as you doe your conceits, That the ſunne was a great ſhip ſailing about the world: perhaps you would have told us, that theſe ſpots are great whales playing about the ſides of the ſhip; and we ſhould as ſoone beleeve you in this as in the other: but now you cannot certainly tell us, *whether theſe ſpots may not be clouds or evaporations from the body of the ſunne.* But I would know what uſe is there for clouds there; except it be to ſhadow now and then, and to refreſh with raine your world in the moon: and if there be any ſuch watry meteors about the ſun, they muſt needs be extracted out of the ſea, lakes, and rivers, that are in your upper world. And ſeeing theſe vapours cannot be condenſate into clouds without cold, it confirmes my opinion, that the ſun is not hot formally; and that the heaven was nick-named when it was called *æther, ab ardore:* but I much muſe what theſe evaporations ſhould be from the body of the ſun? What, doth the ſun pant and ſweat with his daily labour? Evaporations are hot and moiſt exhalations, is there any moiſture in the ſunne? Doe not theſe clouds and evaporations proceed rather from his horſes noſtrils? But the prince of Poets tels us that they blow light out of their noſtrils;

Æn. 11. ——*Lucemque elatis naribus efflant.*

thus you afford us matter of ſport.

But you goe on in your abſurdities; for having once plunged your ſelfe in this mire, the more you ſtrive and ſtruggle to get out, the faſter you ſticke, and the deeper you ſinke in. You tell us, *That the moone is turned about by our earth:* why doe you not tell us alſo that the ſunne is turned about by the moone, and the firmament by the ſunne, and the *primum mobile* by the firmament, and the firſt mover by the *primum mobile?* and ſo the world ſhall be turned topſie turvie. For is not any of theſe turnings as probable as the moon to be turned about by the earth? perſwade me this, and then you ſhall eaſily aſſure me that the cart drawes the horſe, the crab courſes the hare, and the ſhip turns about the wind? You would make the common-wealth of heaven like many diſordered common-wealths here on earth, where the inferiour and meaner ſort of people will take upon them to rule and guide their ſuperiors, Princes and Magiſtrates, and then all comes to confuſion; the horſes run away with the coach and coach-man:

——*Fruſtra retinacula tendens,*
Fertur equis auriga, neque audit currus habenas.

Is

Is it not reasonable that the inferiour bodies should receive their motion from the superiour, as they have from them their beauty, perfection, and conservation?

But you give the moone many turners; *The earth by her magneticall motion; Jupiter (who turnes the foure lesser Planets) by his body; the Sun by his revolution.* So here be three severall wayes of turning; motion, body, and revolution: but is not revolution, motion? And when *Jupiter* turnes by his body, is there no revolution? Or when the Sunne turnes by his revolution, doth he not turne by his body? It seemes that he that turneth by his body, toucheth, and so *Jupiter* toucheth the lesser Planets. He touched indeed *Venus* in the Poet when he kissed her:

Oscula libavit natæ: ——— *Æn.* 1.

But how he toucheth and turneth these Planets by his body, you doe not instruct us; but your drift in all this, is to shew that if the Sunne carry about his spots or clouds; the earth carry about the Moone, &c. much more may the earth carrie about an arrow or bullet: as if you would say, If the water carrie about the mill-wheele, and the wheele carrie about the mill-stones, much more may the mill carrie about the miller and his horse.

Concerning other mens observations of the flame of a candle carried equally in a ship; of an equall force, casting an heavy body but at an equall distance with & against the motion of the ship; of a heavy body in a ship falling down in a straight line; of a man leaping up in a ship, and abiding in the aire, one second scruple of an houre, and yet the ship not withdraw it selfe sifteene foot: Of these I will say but little, because I have already said something of them elsewhere; yet I must tell you, that though the smoake and flame of a candle within the ship are carried with the ship, it will not follow that the clouds which are without the earth are turned about by the earth. If you could thrust the clouds within the bowels of the earth, they should be carried about with the earth if it did move; but take the same candle of which you talke, and place it in a calme night on the top of the mast, when the ship is carried with the tyde, then you shall see that though the candle is carried along with the ship, yet the smoake being separated from the candle doth not follow the ship, but remaines mounting upward in the aire. If the ship then carrie not along with it the smoak of the candle which is in it, how shall we thinke that the earth can carrie about the clouds which are so farre above it? Now to salve this, you tell us, *That the aire is as well limited in bounds, as that which* *De terræ motu. l. 1. c. 3. 4, 5, &c.*

is included in a roome. But then I anſwer, that it is one thing to be included, and another thing to be limited; every thing that is included in a roome is limited, but not every thing limited is included; what is included muſt needs partake of the motion of that which includes it: the aire within the ſhip is moved by and with the ſhip, becauſe it is included; but the aire without the ſhip though it be limited, yet moves not by or with the ſhip becauſe it is not included.

You ask where the bounds of the air are terminated, and you anſwer your ſelfe by the ſpheare of vaporous aire; or which is all one, by the orbe of magneticall vigour; ſo you diſtinguiſh between the aire, and vaporous aire: but you tell us not how farre this ſpheare of vaporous aire, or this orbe of magneticall vigour reacheth; ſo that wee are not ſatisfied with your anſwer, except you meane that it reacheth to the moon; for you told us before that the moon is turned about by the earth, but then you contradict your ſelfe, for you ſay here, that theſe bounds are not terminated by the concavity of the moone's orbe; ſo where to finde you, and the bounds of your ſpheare of vaporous aire, I cannot tell; neither doe I underſtand how vaporous aire being a ſubſtance, can be all one with magneticall vigour which is an accident: and how this accident can have its orbe, this is a new piece of Philoſophie which would be illuſtrated, and ſo doe the words following; *That all earthly bodies are contained within theſe limits, as things are in a cloſe roome, and as parts in that whole to which they belong.*

Though a heavy by equall force be caſt at an equall diſtance, whether it move with or againſt the motion of the ſhip, yet will it not follow that a bullet being ſhot towards Eaſt or Weſt ſhall paſſe the ſame diſtance; for though you caſt your bullet againſt the motion of the ſhip, it is not hindered nor furthered by its motion: ſo if the earth did move, that motion were no more to the bullets motion then if it ſtood ſtill; but it is the motion of the aire that furthers or hinders the bullets motion, whether in the ſhip, or out of it. The earth then turning about the aire with great violence from Eaſt to Weſt, muſt hinder the motion of the bullet or arrow flying to the Eaſt, and further that which cometh from the Eaſt; but it is not ſo in a ſhip, for the ſhip doth not carry the aire before it, but divides the aire whilſt it moves, ſo that the aire gives place, as the water alſo doth to the ſhip, that there may not be penetration of dimenſions. How then can the bullets motion be hindered or furthered

thered by the motion of the ſhip, ſeeing the aire in which it moveth, is neither with it, nor againſt it? Of the winde here I doe not ſpeake.

You grant that in a ſhip under ſaile, a ſtone being let fall from the maſt will not deſcend to the ſame point, as if the ſhip ſtood ſtill; but you ſay, the motion of a ſhip is accidentall, and it is otherwiſe in theſe motions that are ſuppoſed to be naturall. I have ſhewed againſt *Lansbergius*, that there is no naturall motion in the earth, but though there were, what's that to the furtherance or hinderance of the ſtones motion to the ſame point; ſuppoſe that not nature but an Angel turned about the earth, the motion notwithſtanding is circular, be the mover what it will be, externall or internall, Nature or Angel: therefore, it is true ſtill, that as the ſtone falling from the maſt will not deſcend to the ſame point when the ſhip ſaileth, as if it ſtood ſtill; ſo likewiſe a ſtone falling from an high tower, will not deſcend perpendicularly to the ſame point, the earth moving, as it would doe, if it ſtood ſtill. Now, *how farre the ſhip will withdraw it ſelfe in its greateſt ſwiftneſſe, from him that leaps up and ſtayes in the aire a ſecond ſcruple of an houre:* and how far the earth in that ſpace will goe from him in that certaine, neither is it materiall; it is ſufficient that it will remove a certaine ſpace, and that he ſhall not fall upon the ſame place from which he leaped up.

What you granted but now you recall, and tell us of *Galileus*, *That the ſtone would ſtill deſcend unto the very ſame place, whether the ſhip moved or not.* So farre I yeeld, that if a heavy ſtone be let fall from a ſhort maſt whileſt the ſhip moveth ſlowly, it is ſcarce diſcernable that the ſtone hath fallen or varied any thing from the perpendicular line: but if a ſmall ſtone be let fall from a high maſt whileſt the ſhip moveth ſwiftly, then it is plaine to any man that hath ſenſe, that the ſtone doth not fall upon the ſame point on which it would have fallen, if the ſhip had ſtood ſtill. Now to ſay that the motion of the ſhip is impreſſed in the ſtone, is a toy; for how can one body impreſſe a motion in the other whileſt they are ſeparated, as the ſtone and ſhip are before it fall? of magneticall bodies I ſpeake not.

Being weary a ſhip-board you come on ſhore, and ſo having taken horſe, you put ſpurs to his ſides, and in your full cariere, you let a bullet drop out of your hand, which you ſay, *Hath a tranſverſe motion, beſides the motion of the deſcent.* But how ſhould it have the tranſverſe motion of the horſe, ſeeing the hand doth but

unfold it ſelfe to let it fall; the arme indeed is carried by the ſwiftneſſe of the horſe, and ſo is the bullet whileſt it is in the hand, but being let fall, how can it have a tranſverſe motion, ſeeing the hand did not expreſſe any ſuch motion in it? for to let fall is not to give a tranſverſe motion: and though you would make it all one to caſt a thing from us, and to let drop a thing when we are on horſeback, yet the contrary of this is ſo cleare, that any man may ſee it without the help of ſpectacles. And ſure if there were any tranſverſe motion in the deſcent of the bullet, it is rather to be aſcribed to the motion of the aire, then to the opening of the hand; therefore this is but a crotchet, as likewiſe your conceit of a bullet ſhot out of a cannon ſet on end; you ſpend your powder, and bullets, and paper too, to no purpoſe; for you ſhall never perſwade me (for all your two printed canons) that the bullet ſhot out and being in the aire can partake of the earths circular motion, till firſt you prove that the earth doth move, and then bring me better reaſons then as yet you have done, for the circular motion of the bullet in the aire; it is not the picture (which is the expreſſion of your conceit and Idea only) that can evince my underſtanding, when ſenſe and reaſon are on my ſide; for what may not men ſet forth in pictures; Chimæra's, Centaures, Gorgons, &c. and what not? *Pictoribus atque Poetis*,—— you know what followes.

Now you goe a birding; for what is a gentleman but his pleaſure? and you diſcharge your peece with that dexterity that you hit the poore bird flying, as ſurely as if he were ſitting upon a tree: and what followes upon this? Namely, *That the motion of the piece as in aiming it is made to follow the bird in its flight, is communicated to the bullet in the aire.* But I ſee that though you have killed the bird, yet you are no good birder; for at the inſtant whilſt the peece is diſcharged, it is held ſteadie, ſo there is no motion of the peece imparted to the bullet in the aire; but though the peece did move, will it follow therefore that the earth turnes about bullets in the aire? if your powder and ſhot be not better then your arguments, you'l never kill birds.

But what a monſtrous abſurdity doe you tell us, *That if a violent winde be able to drive ſhips, throw downe towers, turne up trees, much more may the diurnall motion of the aire (which doth ſo farre exceed in ſwiftneſſe the moſt tempeſtuous winde) be able to carry with it the bodies of birds?* If the diurnall motion of the aire exceed the windes in impetuoſitie, how comes it, that it doth not the ſame effects that

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the winde doth? why doe we not feele its force? ſurely if the aire did move with that violence from Eaſt to Weſt, that a tempeſtuous winde doth, we ſhould never have any ſhips come from the Weſt Eaſtward; nor ſhips bound Weſtward ſhould ſtay for a winde, ſeeing the motion of the aire at all times would carrie them with a witneſſe. If we ſhould have occaſion to ſaile to New England, wee ſhould be there quickly, but no hopes ever to returne thence; how ſhould we be able to walke or ſit on horſebacke, travelling againſt the motion of the aire, if it did move with that violence you ſpeak of? much leſſe could birds in their flight reſiſt ſuch a force; not the great bird Ruck (that I may fit you with a bird ſomewhat proportionable to your conceits) whoſe wings are twelve paces long, and ſnatches up elephants (as if they were but mice) in his talons a great way in the aire: ſometimes you play the Painter, as in your circles and other figures; and ſometimes the Poet, as here:

Admiranda canis, ſed non credenda.——

As for your diſtinction of the motion of heavie and light bodies, to wit, *That they being conſidered according to the ſpace wherein they move, their motions are not ſimple but mixed of a direct and circular; but according to the medium wherein they move, they have properly right motions.* This I ſay is ſuch a riddle, that *Oedipus* could ſcarce have ſolved it; for why ſhould not the motion be mixed as well in the medium as in the ſpace? Is the aire or medium a hinderance to circular motions, ſo that theſe bodies can onely move there in a ſtraight line? if ſo, you contradict your ſelfe, for you tell us ſtill that bodies are moved round by the aire, and this by the earth. And how ſhall we underſtand that a ſtone falling downeward hath a mixed motion of a direct and circular according to the ſpace wherein it moves, but a ſimple ſtraight motion according to the aire wherein it moves? What mean you by this word (*ſpace?*) you cannot meane the *ubi* of theſe bodies moving, for that is their reſt in the place to which they move: *ultima perfectio corporis mobilis.* You doe not underſtand I thinke the intervall of the ancients which *Ariſtotle* hath refuted, as being neither a ſubſtance nor an accident; not a ſubſtance, becauſe there would be penetration; not an accident, for ſo an accident ſhould be better then the ſubſtance; for *Locus eſt prior & nobilior locato.* And if by ſpace you underſtand the aire, then how will your diſtinction ſtand, the aire or medium, and the ſpace being all one? the place it cannot ſignifie, for the ſtone deſcendeth not in its place, but to it; therefore what your ſpace is,

and how diſtinguiſhed from the medium, I thinke you doe not know. If wee ſhould aske you with what motion Chriſts body aſcended into heaven, you will anſwer that according to the ſpace wherein it moved, it aſcended by a mixed motion of a direct and circular, but according to the medium, it aſcended by a ſimple ſtraight motion; and ſo wee ſhall depart from you as wiſe as we came, like thoſe that conſulted with *Sibylla*; *Inconſulti abeunt*——

You ſay, *That* Ariſtotle *would not deny but that fire may aſcend, and yet participate of a circular motion, ſo likewiſe muſt it be for the deſcent of any thing.* *Ariſtotle* is beholding to you, for if you will beleeve him that heavie bodies muſt have a double motion, becauſe he would not deny but that the fire may have a double motion; then if he would not deny but that the heavens may move round, and that the earth may ſtand ſtill, you will beleeve him; much more I hope you will credit him when by irrefragable reaſons hee proves the motion of the one, and immobilitie of the other: but how ever, it is bad reaſoning from the poſſibilitie of one thing to the neceſſity of another; great oddes between may be, and muſt be; between fire and earth; becauſe *Crœſus* may be poore, muſt therefore *Irus* be rich? Becauſe *Ariſtotle* ſaith the fire may deſcend, muſt the earth therefore aſcend? there is no conſequence *à poſſe ad eſſe*; much leſſe *à poſſe ad neceſſe.*

I will ſuppoſe with you, *That whilſt the ſhip is in her ſwifteſt motion, a ball of wax being let fall into a veſſell full of water, may be ſlow in ſinking, and that the motion of the ſhip will not be diſcernable in it.* But that the wax ſhould ſeem to the eye to deſcend in a ſtraight line I wil not ſuppoſe, becauſe I have found it otherwiſe; the wax will ſeeme to have a tranſverſe motion in the water though it deſcend in a ſtraight line: ſo an oare ſeemes to be broken in the water, which element is not a true medium for the ſight; now the reaſon why the motion of the ſhip in the way is not diſcernable, is becauſe the great diſproportion betweene the bigneſſe of the ſhip, and ſmallneſſe of the wax: and becauſe that motion is not the waxes owne, but the ſhips: theſe two reaſons concurring, make this motion in the wax indiſcernable; but ſuppoſe what you ſay were true in preternaturall motions, it will not therefore follow, that is alſo true in motions naturall.

If the aire did move round with the earth, it is moſt certaine that the comets would ſeem alwayes to ſtand ſtill, being carried about by the revolution of this aire; but experience ſheweth that they

riſe

riſe and ſet; to this you anſwer, *That moſt comets are above the ſpheare of the aire which is turned round with our earth. Anſw.* You told us before that the earth turneth about the moone, therefore it muſt follow that the comets are above the moone, if they be above that aire which is turned about with our earth. 2. We have already ſhewed that the aire ſometimes moveth the earth, but that the earth moveth the aire is falſe and prepoſterous. 3. You tell us, *That thoſe comets which are within the orbe of our aire ſeeme to ſtand ſtill, you inſtance that comet mentioned by* Joſephus, *which hung over Jeruſalem. Anſw.* That was no ordinary comet or the worke of nature, but a miracle or worke of ſupernaturall power, as the reſt of thoſe prodigies which happened about the ſame time; to wit, the ſudden light which appeared halfe an houre about the altar; the Cow that brought forth a Lambe in the Temple; the flying open of the braſen gate of its owne accord; the chariots and armed men that were ſeene in the aire, &c. Now when you ſay, *That this comet being within the orbe of our aire, ſeemed to ſtand ſtill*; you are deceived, for it was Gods worke that it ſtood ſtill over that place: and it did not ſeeme, but did truly ſtand ſtill, by which it is plaine that the earth moveth not; for if it did move, then the comets which are neereſt to it would move ſwifteſt; but the contrary of this is true, for the higher the comet is, the ſwifter it moveth, the lower, the ſlower; yea ſcarce at all; becauſe it is the heaven that moveth the comets, and not the earth: ſo you falſifie *Seneca*, for he doth not ſay that theſe low comets ſeeme to move, but the clean contrary, that they are altogether immovable, *undique immota.*

De bello Judaico. 7. c. 12

Natural. quæſt. l. 7. c. 6

You ſay, *That you might juſtly paſſe over my nine arguments which I urged in one Chapter, againſt your opinion; but becauſe I proceed* (ſay you) *with ſuch ſcorne and triumph, you will examine my boaſtings.* You doe wiſely, like the Romans, who that their Generals might not be puffed up with the glory of their triumphs, cauſed ſome to walke along by their chariots, uſing upbraiding words; the like doe you, calling my arguments cavills not worth the naming; yet you are pleaſed to name them, to ſhew doubtleſſe their weakneſſe, and your wit.

L. 1. ſect. 1. c. 6.

My firſt cavill (as you call it) is this; If the earth move, it will be hotter then the water, becauſe motion is the cauſe of heat: but that the earth ſhould be hotter then water, is repugnant to that principall in naturall Philoſophie which affirmes the earth to be colder; beſides, the water would never freeze if it were moved as

ſwiftly

ſwiftly as the earth. This argument becauſe you cannot anſwer, you picke (as you thinke) a contradiction out of it, which is this; The earth by motion is hotter then the water, and yet the water moves along with it, which water is made warme alſo by motion, that it is not capable of congelation. *Anſw.* Is this a contradiction thinke you: the earth is hotter then the water, and yet the water is hot too; the fire is hotter then the aire, and yet the aire is hot too? who ever heard that the degrees of compariſon make a contradiction? I ſhould not contradict my ſelfe, if I ſhould ſay, *Keplar* was a cold diſputant, but you are a colder. 2. Though I ſay that the water moveth along with the earth, yet the earth may be hotter then the water without any contradiction; for of two bodies moving together, one may be hotter then the other, eſpecially, if they be of different natures; who knowes not that drie and ſolid bodies (ſuch as the earth is) are more capable intenſively of heate, then thin and moiſt bodies, ſuch as the water is? 3. Though the earth, water, and aire next to it, be not ſevered one from another, yet they are made hot by ſuch a violent motion: when you runne, your cloathes, skin, fleſh, bloud, &c. are not ſevered one from the other, and yet your motion makes them all hot. 4. If motion in fluid bodies were the cauſe of coldneſſe (as you ſay ſome do think) then it would follow, that the more you move, your bloud ſhould be the colder. *Scaliger* ſhewes, that they who water their horſes being hot, uſe to ſtirre the water violently, that it may be brought to a warme temper, that the horſes may drinke without danger. 5. I deny that all running waters are the coldeſt, neither are they the colder becauſe they run, but becauſe the meet ſtill with freſh aire: ſo ſhall you in a cold day (if you riſe to walke) be colder for a while, then when you ſit ſtill; not becauſe you walke (for that in time will warme you) but becauſe you meet with freſh aire, vvhich you did not vvhileſt you ſate; neither is there yet ſo much heat in you as to abate the ſenſe of the cold aire, till your motion have cauſed it. 6. I deny that the ſtrongeſt windes are ſtill the coldeſt, though they blow from the ſame coaſt at the ſame time of the year, for I have obſerved that in one *February*, a gentle eaſterly vvind hath brought ſnovv, and the next *February* a ſtrong Eaſt vvinde hath brought raine. 7. If reſt be the cauſe that in cold vveather vvater doth freeze, then all vvaters that reſt vvould freeze, and no running vvaters vvould freeze; but this is falſe, for ſome vvaters reſting doe not freeze, and ſometimes running vvaters doe freeze, vvhen the

the motion is not ſo ſtrong as to ſtirre up the heat; therefore, it remaines that the heat cauſed by the motion, and not the motion it ſelfe, is the hinderance of the waters freezing. 8. If this motion were true that the earth runnes foure miles in a minute, the heat of the aire would be more then moderate; even in winter you could not indure the heat of it; we ſhould need no fire to warme us; wood would be cheap enough.

2. My ſecond argument was this: If the earth did move the aire, then the aire which is next to the earth would be purer, as being more rarified; but the contrary is true, for the higher the aire is, the purer it is. You anſwer never a word to this argument, which ſhewes you aſſent; *Qui tacet conſentire videtur.*

3. My third argument: If the earth did move the aire, it would cauſe a ſound, but this is no more audible then the Pythagoricall harmony of heaven. You anſwer, *That there is no reaſon why this motion ſhould cauſe a ſound, more then the ſuppoſed motion of the heavens.* But I ſay, there is a great deale of reaſon, for if any ſolid body, be it never ſo ſmall though an arrow, bullet, or wand, moving the air, cauſe a ſound; will not the vaſt body of the earth turning the aire with that violence cauſe a hideous noiſe, which would make us all deafe? now, there is no reaſon why the motion of the heavens ſhould make any ſound, for neither are they ſolid bodies themſelves, nor doe they move or encounter any ſolid body, nor is there any aire in heaven; which things are required to make a ſound.

4. I argued, that nature had in vaine endowed the heavens with all conditions requiſite for motion, if they were not to move; for they have a round figure, they have neither gravity nor levity, they are incorruptible, and they have no contrary. This you ſay will prove the earth to move as well as the heavens; *For that hath a round figure, it is not heavy in its proper place, and being conſidered as whole, the other two conditions you reject as being untrue, and not conducing to motion.* *Anſw.* Though I ſhould grant you that the earth were round, yet it is not ſo exactly round and ſmooth as the heaven; for it hath many mountaines and vallies, and ſome hills higher, ſome lower: is a globe or boule that hath knobs and dents in it ſo fit for motion as that which is ſmooth, and equally round? 2. I have ſhewed already the folly of that conceit, which holdeth the whole earth not to be heavy in its own place, as if the elements muſt looſe their eſſentiall properties being in their own places, whereas it is the place that preſerveth the propertiese and eſſence of things.

Have the fire and aire loſt their levity becauſe they are in their own places? and is it not abſurd to ſay (as I have already ſhewed) that there ſhould be weight in a part of any thing, and not in the whole? as if a piece of an yron bullet were heavie, but not the whole bullet: you were as good ſay, that *totum non eſt majus ſuâ parte.* 3. Whereas you ſay that the heavens are corruptible, you may ſay alſo that they are generable; and ſo being ſubject to generation and corruption, they are of the ſame nature with ſublunary bodies, and muſt have the ſame matter; ſo that as there is a tranſmutation of the elements into each other, even ſo the heavens may be changed into the elements, and theſe into them: heaven may become earth, and earth heaven; this is your admirable learning which paſſeth all underſtanding. 4. Heaven (it ſeemes by you) hath a contrary, but you tell us not what that is; they are not contrary to one another, as fire and water; nor are they contrary to ſublunary things, for they cheriſh and preſerve them; neither have they the ſame common matter. 5. Any ſenſible man may eaſily conceive, that contrariety and corruption are hinderances to a perpetuall circular motion; and becauſe (as is ſaid) the heaven is not capable of them, but the earth is, it will follow that I argued upon good grounds, that the heavens onely are endowed with all things requiſit for motion, and not the earth: and therefore God will have nothing idle, as hee made nothing in vaine: hee hath made the heavens, and the three ſuperiour elements to be exerciſed with motion, and the loweſt element with generation and corruption; but it were ſtrange if the earth ſhould be ſubject to all three, and the heavens to none, but ſhould ſtand ſtill. and be perpetually idle; this is not ſutable to the wiſdome of the Maker.

5. I reaſoned that all ſimilary parts are of the ſame nature with the whole, but each part of the earth doth reſt in its place, therefore doth the whole alſo. You ſay this Argument would prove, *That the ſea doth not ebbe and flow, becauſe every drop of water hath not this motion; or that the whole earth is not ſpherical, becauſe each part hath not the ſame forme.* *Anſw.* I have ſhewed already that the ebbing and flowing of the ſea are not eſſentiall to the ſea, for in many places the ſea doth not ebbe and flow; therefore it is no wonder, that parts of the ſea, being ſevered from the whole, loſe that motion, ſeeing many parts being joyned with the whole have it not. This motion then is cauſed by externall agents; but thoſe qualities which are eſſentiall to the whole, are not loſt in the parts: Every drop

drop of water is heavy, and moves downward, becauſe the whole doth; every drop of ſea water is ſalt, becauſe the whole is. 2. I have ſaid already that the earth is not exactly ſphearicall, and though it were, your conceit is nothing: for roundneſſe belongs not to the earth, *quà talis*, as it is earth, *ſed quà tota*, as it is whole. When a thing ceaſeth to be whole, it loſeth the figure of the whole, neither are external figures or outward qualities eſſential to things, but common accidents onely: Now, the qualitie of reſting in the loweſt place is eſſentiall to the whole earth, therefore to the parts alſo.

6. I ſaid that the Sun in the world is as the heart in mans body, but the motion of the heart ceaſing,, none of the members ſtirre; ſo neither would there be motion in the world if the Sun ſtood ſtill: *This* (you ſay) *is rather an illuſtration, then a proof.* I grant it; for I uſed it as an illuſtration to diſcover with its light the weakneſſe, and to diſpell the darkneſſe of your opinion. And were it not an abſurd thing to think that the arteries move, but the heart ſtandeth ſtill? So no leſſe abſurd is it to ſay, that the Earth moveth, but the Sunne ſtandeth ſtill. 2. Illuſtrations oftentimes are forcible proofs, and uſed they are both by Divines and Philoſophers.

7. I ſaid that the Sun and heavens work upon theſe inferiour bodies by their light and motion. You ſay, *That the Sun and Planets working upon the earth by their owne reall, daily motion, is the thing in queſtion, therefore muſt not be taken for a common ground.* *Anſw.* If nothing ſhall be taken for a common ground which is or hath been in queſtion, then there are no common grounds in Divinity and Philoſophy; for I know no fundamentall doctrine in the one, or principall in the other, which hath not been queſtioned by wanton and unſettled ſpirits. 2. I ſaid that the heavens work by motion; you inferre, as if I had ſaid, of a reall daily motion: I ſpake neither of daily nor annuall motion; if hee doth not work by his daily, doth hee work by his annuall revolution? 3. Tell mee if you can, from whence proceed the many motions and mutations that are in ſublunary things? from themſelves they cannot; from a ſuperior cauſe then they muſt, and what is that but the heavens? and what other media or meanes are in heaven by which they work, but light and motion? If you can tell us any other beſides theſe, wee will be beholding to you.

8. I proved that the earth muſt be firme and ſtable, becauſe it is the foundation of buildings. You ſay, *That it is firme from all jog-*

ging, and uncertaine motions. *Anſw.* This is a jogging conceit of yours, and an uncertain anſwer, as I have ſhewed already; for motion, as it is motion, is an enemy to buildings, be it never ſo uniforme; and a moving foundation can be no ſettled foundation: If a foundation be ſtable, how can it move? if it move, how can it be ſtable?

Iſa.60.20. Rev.10.6. Rom.8.

9. My ninth Argument was taken from the authority of Divines, grounded on Scripture; *Thy Sun ſhall no more goe downe, &c.* In the Revelations the Angel ſweares *there ſhall be no more time*; therefore the heavens muſt reſt, whoſe motion is the meaſurer of time; ſo S. *Paul* ſaith, *The creature is ſubject to vanity*; this is the vanity of motion, of which *Solomon* ſpeaks: *The Sun riſeth, and the Sun goeth downe, &c.* *This* (you ſay) *is but a weake Argument; for it is granted that this opinion is a Paradoxe.* *Anſw.* As it deviates from the opinion of other men, it is a Paradoxe, but as it is repugnant to Scripture, it is a Cacodoxe. 2. When you ſay that *Iſaiah* ſpeaketh of that light which ſhall be in ſtead of the Sun and Moon, doe you anſwer any thing at all to his teſtimony? *Thy Sun ſhall no more goe downe, &c.* for hee diſtinguiſheth between that light which God ſhall give to his Saints, and the light of the Sun which ſhall no more goe downe; ſo that hee doth not confound theſe two lights which are in God and in the Sun, as you would have it. A part of the Churches happineſſe ſhall be, that ſhee ſhall both enjoy the light of the Sun without intermiſſion, and alſo that new inacceſſible light of divine viſion. If then the Sun ſhall goe downe no more, it argues that the Sun uſeth to goe downe: Now, if you will have theſe words underſtood myſtically, yet the thing to which they doe allude muſt be underſtood properly; to wit, the going down of the Sun. 3. You will have time to be meaſured by the motion of the earth, not of the heaven; and this you prove out of *Pererius*, who ſaith, That time depends upon the motion and ſucceſſion of any duration: But *Pererius* explaines himſelfe in another place: that that is only time properly and principally, which is meaſured by the motion of the *primum mobile*: becauſe the motion of the heaven is the firſt, and the cauſe of all other motions; and becauſe it is the leaſt, as being the ſwifteſt; and it is moſt certaine, and uniforme, univerſall, and known to all: ſo that if the earth did move (which as yet you have not proved) yet theſe conditions cannot agree with the earths motion: time which is meaſured by other motions, is not properly and formally, but materially and improperly

perly ſo called, ; ſo it is falſe that the earths motion is the cauſe of time, which *Pererius* never affirmed or dreamed of. 4. You will have the heavens ſubject to other vanities beſides that of motion ; as firſt unto many changes, witneſſe the comets ſeen amongſt them ; and then to that generall corruption in the laſt day, when they ſhall paſſe away with a noiſe, &c. *Anſw.* If changes be vanity, to how much vanity is your world in the Moon ſubject, which ſo often changeth ? 2. Though the heavenly bodies were ſubject to other vanities, as you ſay, yet theſe will not exempt them from the vanity of motion. 3. How comets, which are Gods extraordinary workes, and denouncers of his judgements, are vanities, I underſtand not. 4. That the Apoſtle ſpeaks of comets in that place, is your part to prove either by reaſon or authority. 5. That comets which are ſeen onely by us in the aire, are diſcerned by you amongſt the heavenly bodies, is no wonder, ſeeing you can diſcern a world in the Moon. 6. St. *Ambroſe* on that place ſheweth, that the vanity to which the heaven is ſubject, is the continuall toile of their motion, and that it expects reſt, that it may be delivered from ſervile work. 7. If the heavens be ſubject to the vanity of corruption, as you ſay, tell us whether you ſpeak properly and philoſophically, or metaphorically ? If philoſophically, you are abſurd ; for every freſh-man can tell you that heaven is not capable of generation and corruption ; if metaphorically, you ſpeak impertinently ; for by the paſſing away of heaven, is meant onely the abolition of imperfect qualities, and a perfecting of it to a more glorious eſtate. 8. *The heavens* (you ſay) *are ſubject to that generall corruption in which all creatures ſhall be involved in the laſt day.* But you cannot tell us what that corruption ſhall be, and ſo you ſpeak at randome : you doe not mean (I hope) that the heavens ſhall be involved in the ſame corruption with ſnakes, rats, toads, and other ſuch kinde of creatures.

You ſay that there is not ſuch invincible ſtrength in my arguments, as might cauſe me triumph before hand. But I ſay there is ſo much vincible weakneſſe in your anſwers, that makes me think that the refutation of them deſerves neither triumph nor ovation ; ſo that my ſtrife with you is but

——*pugna nullos habitura triumphos :*

neither did I purpoſe to make you any reply, had not ſome friends ſolicited me to vindicate the truth and my owne credit, which

ſeemed to be ſomewhat eclipſed by the unwholſome fogs, and miſty diſcourſes of your Book.

I ſaid that the heaven was called *Æthera, ab ἀεὶ θεῖν*, from its continuall motion; and the earth *Veſta, quòd vi ſuâ ſtat*, from its immobility. *You ſay they were ſo called becauſe it was then the common opinion, that the heaven moved, and the earth ſtood.* But now becauſe you are of another opinion, it's fit that the names be changed aſwell as the nature; let the heaven now be called *Veſta*, and the earth *Æthera*; or let heaven be called *Terra, quòd perenni curſu omnia terat*, and the earth ſhould be called *cœlum, à cælando*; ſo let all things and arts be confounded: Grammar, aſwell as your Logick, Philoſophy, and Aſtronomy. 2. If heaven and earth have their Etymology from what they ſeeme to be, not from what they are; then the like may be ſaid of other things. Fire is called *focus, à fovendo*, from cheriſhing; the ſea is called *mare, quaſi amarum*, becauſe it is ſalt or bitter; not that theſe things are ſo, but becauſe they ſeem to be ſo: the like may be ſaid of other Etymologies. 3. For your conceit of the Hebrew word *Erets* from *Ruts*, becauſe it runs, is but a running motion of your head. The Hebrews who were better skilled in their owne language, then you are, derive *Erets* from רצה, becauſe it continually deſires to beare fruit, as *Munſter* ſheweth in *Geneſ. c.* 1.

You object to your ſelfe, *How are two diſtinct motions conceiveable in the earth at the ſame time?* and you anſwer your ſelfe, *that it is eaſily apprehended, conſidering how both theſe motions tend from Weſt to Eaſt, as you inſtance in a bowle. Anſw.* How the earth ſhould have two diſtinct circular motions, is not conceiveable by us, nor demonſtrable by you. Your ſimilie of the bowle is a poor demonſtraſtration, and indeed, falſe; for it running on the ſuperficies of the ground, hath not two circular motions, as you ſhould have ſhewed, but onely one ſuch motion or rowling; the other as it moves from your hand to the mark, is the motion of projection; or rather the bowles motion, is indeed but one, being a mixed or compounded motion; neither doth it move with two diſtinct circular motions in the ſame place at the ſame time, as you will have the earth to doe: but it runs from one place to another; neither is it naturall, but violent: and though it were true that the bowle had two diſtinct circular motions in the ſame place at the ſame time, yet it will not prove that the earth is either capable, or we conceiveable

veable of theſe two motions, conſidering the diſproportion that is between the vaſt and heavy earth, and a ſmall light bowle.

You conclude this Chapter, ſinging the triumph before the victory; for you ſay that we may gather ſome ſatisfaction out of it, but indeed we can gather none: neither are we a whit the wiſer for it, but leave it with as great diſcontent, and as little ſatisfaction, as they did *Sibylla*'s cave, who came to conſult with her intricate Oracles; *Inconſulti abeunt, ſedemq́, odêre Sibyllæ.*

CHAP. IX.

1. *The earth cannot be the cauſe of its owne motion.* 2. *The vaſtneſſe and thickneſſe of the heavens no hinderance to its motion.* 3. *The matter of the heavens and their ſmoothneſſe no hinderance to their motion.* 4. *Bigneſſe helps motion.* 5. *The heavens ſwiftneſſe illuſtrated by other motions.* 6. *The earth neither the finall nor efficient cauſe of its motion, the heaven fitter for motion, becauſe greater, and more conſtant; nature worketh not ſtill the moſt compendious way, ſome idle ſimilitudes refuted.* 7. *Bodies having the ſame properties have not alwayes the ſame motion; motion belongs to the nobleſt creatures.* 8. *The ſmoothneſſe, ſubtilty, and purity of bodies no hinderance to their motion; the aire moves the water, the circular motion of the fire naturall how.* 9. *Of Intelligences how and why they move the heavens.* 10. *Magneticke vertue an idle conceit.*

IN this Chapter, *ampullas loqueris & ſeſquipedalia verba*; you talk not like a man of this world, but like one who hath dwelt long in the Moone; or as if you were *Jupiters* ſecretary with *Minos*, and had the honour with *Æolus*, ——*Epulis accumbere divûm.* *Jovis arcanis Minos admiſſus.* You diſpute of the magnitudes and diſtances of the orbs, and of the ſwiftneſſe of their motion with that exactneſſe, as if you had meaſured them with a line: but I wonder how you could ſtand ſteady to take their meaſure, ſeeing the foundation on which you ſtand whirles you about foure miles every minute of an houre. I ſhould thinke that your head was giddy when you wrote this, and that indeed you can no more diſpute of theſe things, then a blinde man can doe of colours; neither can we give you any credit untill firſt you goe thither, and bring us a certificate ſigned with the hands of theſe Angels which turne about the orbes; otherwiſe you will but looſe your labour: ——*Nec quidquam tibi prodeſt*

Aereas tentaſſe domos, animóque rotundum,
Percurriſſe polum ——.

1. *You will have us ſuppoſe that the earth is the cauſe of this motion*; but this wee may not ſuppoſe, for if there be any motion in the earth, the earth is the ſubject of that motion, but not the cauſe; for

for nothing can move it ſelfe; *movens & mobile* are diſtinct things: but what if we ſhould ſuppoſe what you deſire, what will be gained thereby? to wit this, That the heavens ſhall be freed from their inconceivable ſwiftneſſe: and is not this a goodly reaſon. We cannot conceive how the heavens move ſo ſwiftly as they ſay, *ergo* we muſt ſuppoſe the earth to move? Shall we ſuppoſe the fire to be cold, becauſe we cannot tell how the ſunne is hot? If one cannot tell how the eye ſeeth, will you bid him ſuppoſe that the foot ſeeth? This is, *homines ex ſtultis inſanos facere*: let the ſwiftneſſe of heaven be never ſo great, we cannot ſuppoſe the earth to move. For that they may be ſwifter then our thoughts, is not impoſſible, if either we look on Gods power, or on the aptitude in theſe bodies for ſuch a motion: *But you will not have us flye to Gods power what he can doe*: I pray you then whither ſhall we flie? *If we goe up into heaven he is there, if we goe downe to hell he is there alſo, &c. Whatſoever is done in heaven, and in the earth, &c. he doth it himſelfe*, ſaith *David. Hee ſuſtaineth all things by the word of his power*; *In him we live, move, and have our being*: therefore the Philoſophers ſaid well, that he was the firſt mover, and that the outmoſt heaven was the firſt moveable. *But if you will have us looke unto the uſuall way of providence what is moſt likely to be done*, then we ſay that it is moſt likely, that the heavens move, and the earth ſtands ſtill, as is already proved.

2. *You ſay, the heavens being vaſt, materiall, condenſate ſubſtances, are not capable of ſuch a motion*: I heare words but to no purpoſe, for you ſhould tell us, whether the matter of heaven, and the condenſation thereof be like this of the earth; and whether the mover be ſo weake as that he cannot turne about thatvaſt body. I had told you heretofore that bodies move ſwifter or ſlower, not becauſe they are greater or leſſer, but becauſe they are heavier or lighter. Motion which you call a Geometricall thing (but you are in this decived) depends not from quantitie, leſſer bodies move oftentimes ſlower then the greater; a ſnaile then an elephant, a pebble ſtone then a great cloud: it is not then beyond the phanſie of a Poet, or madman, (as you madly ſpeake) for the heaven to move very ſwiftly; but if any man will take upon him to tell exactly how ſwiftly the heaven moveth, or that the earth moveth at all; I muſt needs tell him that he needs hellebor.

L. 2. ſect. 1. c. 1.

3. When we ſay that the heavens are bodies without gravitie, you anſwer us with your recocted coleworts, or idle evaſion of yours ſo often repeated, *That the whole earth in its owne place is not heavy*: which

which ſhift we have divers times already refuted: but when you ſay, *That the heavens being of a materiall ſubſtance, it's impoſſible but that there ſhould be in them ſome ineptitude to motion:* you ſpeake like one who is a ſtranger to Philoſophie, for if it were not for the matter, there would be no motion in the world. As the forme moveth, ſo it is by reaſon of the matter that all things are moved, ſo that where there is matter, there can be no ineptitude to motion in reſpect of the matter. But it is a rugged conceit in you when you ſay, *That it's not conceiveable how the upper ſpheare ſhould move the lower, unleſſe their ſuperficies were full of rugged parts, or elſe they muſt leane one upon the other. Anſw.* What rugged parts are there in the ſuperficies of winds and clouds, when the windes move the clouds? or what ruggedneſſe is there in ſmooth waters, when in rivers the formoſt waters are moved forward by the hindermoſt? Or in the ſmoake when it carrieth upward a piece of paper? But when you ſay, *That the farther any ſpheare is diſtant from the* primum mobile, *the leſſe it is hindered by it, in its proper courſe:* It is true, and yet not repugnant to *Ptolomies* opinion, who ſaith, That in heaven there is no reluctancie; for his meaning is, that there is no inferiour ſpheare that hindereth the ſwiftneſſe of the *primum mobile*, and that is the reaſon why it is ſo ſwift, becauſe it hath no reſiſtance either from the forme, or from the matter, or thickneſſe of the medium.

Novv, *In nova fert animus,*—— you vvould faine play the Poet, and build caſtles in the aire, but indeed you have already played the Poet too much; for your vvhole booke is nothing elſe but a heap of fictions; your vvorld in the Moone, your moving earth, your ſtanding heavens, your figures and characters, what are they elſe but pleaſant dreames, and idle phanſies, fit enough to be inſerted into *Ovids Metamorphoſis*, if you could digeſt them into good verſes? And you doe not onely play the Poet, but the Painter alſo in your figures, for a fictitious Picture is a viſible Poem, and a Poem is an audible Picture; Painters and Poets have authority you knovv. *But you wonder much why Poets have not feigned a caſtle to be made of the ſame materials with the ſolid orbes. Anſw.* I thinke the reaſon is, becauſe they did not knovv that there vvere people in the Moone; if they had knovvn this, doubtleſſe they vvould have fitted them vvith inchanted caſtles, and other bnildings; novv vvhat they have omitted, doe you, that poſterity vvhen you are dead may ſay;

——— *Nunc non cinis ille Poetæ*

Felix? non levior cippus nunc imprimit ossa?

But I vvill not novv ſpend time in vievving the parts and materials of your Poeticall caſtle, till you have brought it to perfection; and then I vvill take a ſurvey of every particular.

4. I had ſaid that a bigger body, as a mill-ſtone, vvill naturally deſcend ſvvifter then a leſſe, as a pebble ſtone; the cauſe of this, *You will not have to be aſcribed to the bodies bigneſſe, but to the ſtrength of naturall deſire which that big body hath to ſuch a motion.* *Anſw.* You make a ſhevv as if you did anſvver our argument, but in effect you anſvver nothing: for if I ſhould aske you vvhy a mill-ſtone falls faſter then a pebble, you will anſwer, becauſe it hath a ſtronger deſire to fall; but if I aske againe why it hath a ſtronger deſire, you anſwer, becauſe the bigger a thing is, the ſtronger is its deſire, &c. and is not your opinion now all one with mine in effect? that it is the bigneſſe that is the cauſe of this ſwiftneſſe? now the ſame reaſon is appliable to bodies moving circularly: for though they were in their proper ſcituations, yet there is in them as great a deſire to move about the center, as there is in elementary bodies to move to and from the center; therefore, the greater the body is, the greater deſire it hath to move according to your opinion. Againe, I ſaid that the winde will ſooner move a great ſhip then a little ſtone, you anſwer, *This is not becauſe a ſhip is more eaſily moveable then a little ſtone, but becauſe a little ſtone is not ſo liable to the violence from whence its motion proceeds.* This anſwer is as wiſe as the former, for why is not the ſtone as liable to the violent cauſe of its motion as the ſhip, but becauſe it is not ſo big, therefore the ſhip is more eaſily moveable then the ſtone; becauſe by reaſon of its bigneſſe it's more liable to the violent cauſe of its motion. And when you ſay, *That I cannot throw a ſhip as farre as a ſtone*; I grant it, but this will onely argue want of ſtrength in me, but not want of aptitude for a ſwifter motion in the ſhip then in the ſtone, if I had ſtrength to ſling the one as well as the other. A bigger bullet out of the ſame peece will flie farther and ſwifter then a leſſer.

5. I brought ſome inſtances to illuſtrate the poſſibility of the heavens ſwiftneſſe, as the ſound of a cannon twenty miles off; of the ſight of a ſtarre in a moment, of the light paſſing ſuddenly from Eaſt to Weſt; of the ſwiftneſſe of a bullet carried by the powder; to theſe you anſwer, *That the paſſage of a ſound is but ſlow, compared to the heavens motion; that the ſpecies of ſound or ſight are accidents, and ſo is the light; that the diſproportion is great betwixt the heavens motion*

and

and the ſwiftneſſe of a bullet. *Anſw.* Let the ſound, and light, and ſpecies be what they will be, they are moved; and if they be accidents they cannot be moved alone, but with the ſubject in which they are inherent: therefore, if there be ſuch ſwiftneſſe in the motion of theſe, what need we doubt of the ſwiftneſſe of the heavens? and if accidents can be ſo ſwiftly moved with and in their ſubjects, much ſwifter muſt be theſe heavenly ſubſtances having no reſiſtance, whoſe matter is ſo pure, that it is a great furtherance to their motion: and though there be great diſproportion betwixt the bullets motion and the heavens ſwiftneſſe, yet the motion of the one ſerves to illuſtrate the ſwiftneſſe of the other. And yet I take not upon me as you doe, peremptorily to tell how ſwift the heavens are; and though I ſaid that the light was an accident, yet I ſaid alſo that it was *corpori ſimillimum*, that it comes very neere to the nature of a body: neither did *Ariſtotle* prove the light to be no body, becauſe of its ſwiftneſſe, as if no body were capable of that ſwiftneſſe, for then he ſhould contradict himſelfe as you uſe to doe; but he meanes that no ſublunarie body had ſo ſwift a motion. It had been folly to illuſtrate the ſwiftneſſe of the bullets motion by the motion of the hand in the watch; for there be many other motions far ſwifter then this to expreſſe the bullets motion: but of ſublunary motions there be none ſwifter then thoſe I alledged to illuſtrate the motion of heaven.

6. *You would have the earth to be both the efficient and finall cauſe of its motion:* But indeed it is neither the one nor the other, for if it move at all, it muſt be moved by another mover then it ſelfe: and God made the heavens not for the earth, but for man; ſo the diurnall and annuall motions have man for their finall cauſe, and heavenly movers for their efficient. 2. You ſay, *That nature is never tedious in that which may be done an eaſier way:* This I will not grant you, for nature doth not ſtill worke the eaſieſt, but the moſt convenient way; but I deny that the earths motion is either more eaſie or more convenient then that of heaven; for a light body, ſuch as heaven is, is more eaſily moved then a heavy; and it is more convenient that the foundation of our houſes ſhould remain firme and ſtable, then moveable, as I ſaid. I could tell you how laborious and tedious nature is in the perfecting of mans body, and of many other things, therefore ſhe doth not take ſtill the moſt com-

pendious way. 3. You ſay, *It is not likely that the heaven ſhould undergoe ſo great and conſtant a worke, which might be ſaved by the circumvolution of the earths body.* How tender hearted are you? are you afraid that the heavens will grow wearie? and I pray you, is not heaven fitter to undergoe a great and conſtant worke then the earth, ſo ſmall, ſo dull, ſo heavy, ſo ſubject to change? a great worke is fit for a great body, and a conſtant work fit for that body that knoweth no unconſtancy. 4. You are deceived when you ſay, *That the heaven receiveth no perfection by its motion, but is made ſerviceable to this little ball of earth.* The perfection of heaven conſiſteth in its motion, as the earths perfection in its reſt; neither was heaven made to ſerve this ball, but to ſerve him who was made Lord of this ball. 5. *Your Similies of a mother warming her childe, of a Cooke roſting his meat, of a man on a tower, of a Watch maker,* are all frivolous. For a mother turneth her childe, and a Cook his meat to the fire, becauſe the fire cannot turne it ſelfe to them; the motion is in them, not in the fire: ſo he that is on a tower, turnes himſelfe round to ſee the countrey, becauſe the countrey cannot turne it ſelfe about him. If you had proved to us that the heaven cannot move, but that it is the earth that moveth, then we ſhould yeeld that the earth did fooliſhly to expect the celeſtiall fire to turne about her; but this you have not as yet proved, neither will you be ever able to prove. The earth indeed is a mother, but as ſenſleſſe and ſtupid as *Niobe*, who would ſuffer her children to ſtarve with cold, if that heavenly fire did not move about her. As for your inſtance of a Watch-maker, I will uſe it in your owne words, but to our purpoſe: *If a wiſe Watch-maker will not put any ſuperfluous motion in his inſtrument, ſhall we not thinke that nature is as provident as any ordinary mechanicke?* Therefore doubtleſſe it had been ſuperfluous for the earth to move. And whereas you ſay, *That the motion of the ſtarres is full of confuſion and uncertainties:* That is true in reſpect of your ignorance; there is an heavenly order, and harmony amongſt them, the confuſion is in your head, and the uncertainty in your knowledge.

7. You ſay, *That motion is moſt agreeable to that which in kinde and properties is neereſt to the bodies that are moved.* But this I ſay is falſe, for an immoveable body is not made capable of motion, becauſe it is neere in ſome properties to the body that is moved. A rocke and a mill-ſtone which perhaps was taken out of the ſame rocke, agree

in

in kinde and properties, will it therefore follow, that becauſe the mill-ſtone moves round, the rocke alſo moves round? The ſea-water and well-water agree in kinde and properties, doth the well-water therefore ebbe and flow? But your drift is to ſhew, *That the earth moveth with the ſix Planets, becauſe both Earth and Planets have a borrowed light, whereas the Sunne and fixed Stars have it of their own.* *Anſw.* A goodly reaſon, the earth muſt move as well as the ſixe Planets, becauſe it hath a borrowed light as well as they; as if you would ſay, *Saturne* and the Moone have a borrowed light, therefore they have the ſame motion and bigneſſe: or thus, the Planets have a borrowed light as well as the earth, therefore, they reſt, or be as heavie as the earth; but what if I ſhould ſay, the Planets have ſome light of their owne, as may be ſeen by the Moone, which the earth hath not; and therefore they agree not in this property of light, and conſequently the earth moveth not as they doe. But when you ſay the fixed ſtars have light of their owne, you ſpeake at randome, for you can ſhew no reaſon of this conceit, why the fixed ſtarres ſhould have light of their owne, and not the Planets; or why the Planets borrow light, and not the fixed ſtars. Againe, you thinke, *That the Sunne and Stars ſhould reſt, becauſe they are of a more excellent nature:* As if motion did belong to the ignobleſt creatures; we know the contrary, Man is a more noble creature then a rocke, yet man moveth, and the rocke is immoveable. The heart in our bodies is more noble then the guts, yet that moveth, they move not. Is the body of man leſſe excellent when it is moved by the ſoule, then when it is at reſt putrifying in the grave. When water reſts from its motion it loſeth its excellencie, and ſtinketh, therefore, motion in many things is more noble then reſt: as for the reſt which you ſay is aſcribed to God, that is not to our purpoſe, for it is tranſcendent and hyperphyſicall; and as God is ſaid to reſt, ſo he is ſaid to move, therefore called Θεὸς. But why you ſhould thinke the fixed Starres of a more excellent nature then the Planets, I know not, neither can you give any reaſon for it.

8. *Ariſtotle* you ſay tels us, that the time of the revolution of each orbe ſhould be proportionable to its bigneſſe, which can only be you thinke, *By making the earth a Planet.* I anſwer, that of two evills the leſſe is to be choſen, and better it is that there ſhould be *De Cœlo. l. 2. c. 10.*

ſome diſproportion between the bigneſſe of the orbes, and the time of their motion, then that the earth ſhould move. 2. You cannot exactly tell what diſproportion there is in their motions, till firſt you finde out the true knowledge of their magnitudes.

That the Comets which move in the aire are not moved by the heavens, but by the earth, you prove; *Becauſe the concave ſuperficies of the Moone is thought to be ſmooth, ſo that the meere touch of it cannot turne about the fire with a motion not naturall to it; nor can the ſubtile fire move the thicker aire, nor this the waters. Anſw.* How the upper ſpheares move the lower, is neither knowne to you nor me but by conjectures. 2. I have already ſhewed that one ſmooth body by its touch may move another, as the winde moves the clouds; ſo in the Northerne ſeas, one mountaine of ice which is ſmooth, moves the other forward. 3. The ſubtiltie and puritie of the fire is no hinderance to its moving of the thicker aire, for doe not our animall ſpirits which are pure and ſubtle, and yet materiall, move our groſſe bodies? Doth not the winde move groſſe ſubſtances? 4. That the aire doth not move the water, is repugnant to experience, for within the Tropickes, the ſea is continually moved from Eaſt to Weſt by the aire; and this by the heaven as I have ſhewed elſewhere. 5. That the circular motion of the fire is not naturall, is falſe; for though this motion proceed not from an inward principle, as the ſtraight motion doth, yet it is naturall, becauſe the nature of the fire is preſerved by it; for the fire never gives off moving upward, till it begin to move circularly, and then is it in its chiefe perfection when it hath attained this motion.

Lansbergius you ſay concludes that the earth is eaſily moveable, from the words of *Archimedes*, who ſaid, that he could move the earth, if he knew where to ſtand and faſten his inſtrument; it is a fooliſh concluſion, for ſo he might as well conclude, that armed men may ariſe out of the ground, becauſe *Pompey* ſaid, that if he did but ſtampe with his foot, the ground would yeeld him armed men. So becauſe *Medea* ſaid:

Ego inter auras aliti curru vehar;

That ſhee would flie in the aire in a chariot drawne by dragons, that therefore ſhee could doe as ſhee ſaid; this is to play the Poet.

9. *The opinion of Intelligences, by which the heavens are moved* (you ſay) *hath its originall from* Ariſtotle's *miſtake, who held the heavens to be*

be eternall. I anſwer, that *Ariſtotle* was miſtaken in holding the heavens to be eternall *à priori*; but I deny that there is any errour in holding them to be eternall *à poſteriori*, in reſpect of their ſubſtance. 2. *Ariſtotle* might have held the opinion of Intelligences, without holding the heavens to be eternall; for the eternity of the mover doth not neceſſarily inferre the eternity of the thing moved: God is eternall, ſo is not the world, our ſoules are eternall, ſo are not our bodies. 3. You prove, *That Intelligentes are ſuperfluous, becauſe a naturall power intrinſecall to theſe bodies will ſerve the turne as well:* So you might inferre that our ſoules are ſuperfluous, becauſe a naturall power reſulting from the matter of our bodies, and intrinſecall to them will ſerve the turne as well. But indeed ſuch excellent bodies as the heavens did require a more excellent forme then ſublunary bodies doe; for theſe are content with an informing form, but the heavens ſtood in need of an aſſiſting forme: and how can we conceive that out of ſuch pure and ſimple materials as the heavens are, there ſhould reſult a naturall power to move them circularly, orderly, conſtantly, perpetually? If our groſſe and decaying bodies are moved with reaſonable ſoules, which though they be internall formes, reſult not from the power of the matter; much more ſhould the heavens be regulated by Intelligent ſpirits, and not by any naturall power. 4. This naturall power of moving muſt be either the forme brought out of the matter, which is done by generation, but in heaven there is no generation, becauſe there is no privation of an other forme, or any appetite in the matter to it; or elſe this power muſt be a forme brought into the matter: but no forme is introduced into the matter, except the reaſonable ſoule; therefore, there is no informing forme in heaven, and conſequently there can be no other movers but Angels. This Argument I urged againſt *Carpenter*, but you winked at it and ſaid nothing. 5. You ſay, *That Intelligences being immaterials cannot immediately worke upon a body.* What is this to the purpoſe? If they work upon bodies, it's no matter how they worke; wee know that our ſoules worke upon our groſſe bodies, and ſo doe the Intelligences upon the heavens: we know that ſpirits work upon muteriall ſubſtances immediately, or elſe there would be no working at all; and it is ridiculous in you to diſable the Angels from working or moving, becauſe they have no inſtruments or hands to take hold of the heavens.

vens. What hands hath your ſoule when it works on your body? What hands hath the winde when it moves the clouds ? 6. You have no reaſon to inſult ſo over the Schoole-men, who affirme, that the faculty whereby the Angels move their orbes, is their will; for what faculty elſe can you imagine in them? Doth not your ſoule worke upon your body by the will? ſo, that albeit there be many inſtruments by which the ſoule moveth the body, yet the prime faculty by which it moveth is the will: ſo that if you ſuſpend your act of willing a motion, you muſt needs ſtand ſtill; and on the contrary, your onely willing to move the hand or foot is ſufficient as the chiefe medium or faculty to move them. And ſo it is with the heavens, ſaving onely that there are no ſubordinate organs by which the Angelicall will doth move the heavens: but when you ſay that there was no need of Angels, *ſince this might be as well done by the will of God:* You ſpeake idlely, for ſo you may ſay that there is no need of our ſoules to move our bodies, ſince this might be as well done by the will of God: Angelicall and humane wills are ſubordinate and ſerviceable to the will of God, but not excluded by it; *For in him we live and move*, and yet we live and move by our ſoules too. And as impertinent is your other queſtion, *How the orbes are capable of perceiving this will in the Intelligences, or what motive faculty have they of themſelves to inable them to obey ? Anſw.* The orbes are as capable to perceive the will of the Angels, as your body is to perceive your will, or as thoſe bodies were which the Angels of old aſſumed, and by them converſed with the Patriarchs: and as thoſe bodies had a motive faculty to obey the Angels will, ſo have the heavens much more.

Keplar's *opinion that the Planets are moved round by the Sunne, and that this is done by ſending forth a magneticke vertue, and that the Sun-beames are like the teeth of a wheele, taking hold of the Planets*, are ſenſeleſſe crotchets, fitter for a wheeler or miller, then a Philoſopher: This magneticke vertue is a ſalve for all ſores, a pin to ſtop every hole, for ſtill when you are reduced to a non-plus, magneticke vertue is your onely ſubterfuge, like *Æneas* his target, *Unum omnia contra tela Latinorum:* If you had told us that the North ſtarre had a magneticke vertue, becauſe the needle touched with the *magnes* looketh towards it, ſome ſilly people perhaps would have beleeved you, and yet the magneticke vertue is in the needle, not in the ſtar;

But

but that in the Sunne there ſhould be a magneticke vertue, it hath no ſhow of probability. *This vertue* (you ſay) *may hold out to ſo great a diſtance as light or heat:* But if this compariſon hold, it will follow, that there is no ſuch vertue in the Sunne, for that light which is in the aire is not in the Sunne, neither is that heate which wee feele cauſed by the Sunne, in the Sunne: but your following words are admirable; *That if the Moone may move the ſea, why may not the Sunne move the earth?* As if you would ſay, If the North-winde ſhake the woods, why may not the South-winde ſhake the mountaines? Or (according to your doctrine) if the earth can move the Moone, why may not *Venus* or *Mercury* move the Sunne? or why may not the Sunne move the Firmament?

You conclude well, *That your Quære's are but conjectures, and that no man can finde out the workes of God from the beginning to the end:* and yet you have found out that which God never made, to wit, a rolling Earth, a ſtanding Heaven, a world in the Moone; which indeed are not the workes of God, but of your owne head: for his workes are incomprehenſible, his wayes paſt finding out. Trouble not then your ſelfe too much in theſe things, which in this life you cannot underſtand; learne to know your ſelfe that wee may know you too, and by the knowledge of your ſelfe, ſtrive to know God, the knowledge of whom is life eternall. I will give you good counſell in the words of *Hugo: Noſce teipſum; melior es ſi te ipſum cognoſcas, quàm ſi te neglecto curſus ſiderum, vires herbarum, &c. Cœleſtium omnium & terreſtrium ſcientiam habares; multi multa ſciunt, ſeipſos neſciunt, quum ſumma Philoſophia ſit cognitio ſui.* *Lib. 1. de Anima.*

CHAP. X.

1. *The idle and uncertaine conceits of Aſtronomers concerning the celeſtiall bodies.* 2. *The appearances of the Sunne, and other Planets cannot be ſo well diſcerned by the earth if it did move.* 3. *The excellency of Divinity above Aſtronomy, and an exhortation to the ſtudy of it.*

THis propoſition is full of ſuppoſitions, fraughted with figures and characters, which more affect the eye then ſatisfie the minde; neither doe they demonſtrate the motions of the earth, but the motions of your head. The pictures in *Ovids Metamorphoſis* adde not the more credit to his fictions, neither

doe theſe figures to your phanſies: wee will beleeve no more then you can demonſtrate by ſenſe or reaſon; demonſtrations are of things true and reall, not of dreames and imaginations: therefore, neither your pictures, nor bare words, ſhall perſwade us, that dayes, moneths, yeares, houres, weekes, &c. are or can be cauſed by the earths motion, till firſt you have proved that the earth moveth; you that cannot abide Eccentrickes and Epicycles in the heavens, are forced now to make uſe of them, both for the motion of the Moone, and of the earth too; ſo that you have not mended but marred the matter, rejecting *Ptolomy* becauſe of Eccentrickes and Epicycles, and yet you admit *Copernicus* with his new deviſed Moone Eccentricks, and Earth Eccentrickes, ſo that you thinke by theſe fictions to ſolve the divers illuminations, bigneſſe, eclipſes, &c. of the Moone. A phantaſticall Aſtronomer might deviſe other wayes beſides theſe of *Ptolomy* and *Copernicus*, to ſhew the different appearances of the Planets; for of things that are uncertaine and beyond our reach, divers men will have divers conceits and conjectures: many have held, and doe at this day yet maintaine, that the ſtars have ſoules and are living creatures, and why may not this be as true as your opinion, that there is a world of living creatures in the Moone? What if I ſhould hold thatthe eight ſpheare is a ſolid ſubſtance, therefore called *firmamentum*, full of holes, ſome great and ſome ſmall; ſo that theſe lights which wee call ſtarres are but beames of that bright and cleare heaven above, called *Empyreum*, ſhining through theſe holes? Or if I ſhould ſay, that every ſtarre had its Angel moving it about the earth, as wee uſe in darke nights to carry lanternes: divers Nations of *Aſia*, *Africke*, and *America*, have divers opinions of the ſtarres, and few or none true, all which do argue our ignorance and fooliſhneſſe; we are but

Curvæ in terris animæ, & cœleſtium inanes.

But any of theſe conjectures mentioned, is as probable as yours of the earths motion; therefore, I was not without ſenſe and reaſon when I concluded my Booke with this Argument, That if the Sunne ſtood ſtill, there could be no variation of the ſhadow in the Sunne Diall: you will ſay that may be altered by the earths motion, but I ſay to you as I ſaid to Mr. *Carpenter*, prove that, and what I profered to him, I alſo profer to you:

——*Phillida ſolus habeto.*

You

You will ſay this may be eaſily proved, if I will admit the earth to move: but ſo you may ſay, that you will eaſily prove an Aſſe to flye, if I ſhould admit that hee hath wings; but I will not admit that upon a falſe maxime of your deviſing, you ſhall inferre what you pleaſe. What if I ſhould admit an abſurd conceit of yours, that the Earth draweth the Moone about? can you prove mee, that when the Moone ſhineth there is any variation of ſhadowes, when both the luminous and opace body are moved with the ſame motion?

2. *The difference* (you ſay) *betweene Summer and Winter, between the number and length of dayes, and of the Sunnes motion from Signe to Signe, and all other appearances of the Sunne concerning the annuall motion, may be ſeene by your Figures; and eaſily ſolved by ſuppoſing the earth to move in an Eccentricall orbe about the Sunne. Anſw.* Not the Sunnes appearances but your phantaſies are to be ſeene by your figures; the earth doth not move becauſe your figure repreſents it: it is alſo an eaſie matter to ſuppoſe things that never were, nor can be; you ſuppoſe the earth to move about the Sunne, and not the Sunne about the earth: you may as well ſuppoſe the houſe to be carried about the candle, and not the candle about the houſe, and ſo all appearances may be ſolved as well this way as the other; for if the houſe did move about the candle, the houſe ſhall be ſeene as well as if the candle did move about the houſe: and why may we not ſuppoſe the houſe to move ſometimes neerer to, and ſometimes farther from the candle, the neerer it moveth, the more it is illuminate, &c. But what *Cato* is ſo grave as to refraine from laughter at ſuch abſurd and fooliſh ſuppoſitions?

You ſpend much paper to ſhew how the Planets will appeare direct, ſtationary, retrograde, and yet ſtill move regularly about their owne centers. This is, *Magno conatu magnas nugas dicere*; and who but *Judeus apella* will beleeve, that one motion of the earth ſhould cauſe ſo many different appearances in the ſeverall Planets? howſoever you talke of *Ptolomie's* Wheele-worke, I preferre his Wheele to your Whirlegig. It is more eaſie for many Planets to wheele about, then for one rocke or piece of earth to whirle about: but you are as exact in placing the Planets, as if you had been upon the top of *Jacobs* ladder. *You place* Mercury *next to*

the Sunne, hiding himſelfe under his rayes; you ſay well, for theeves doe uſe to hide themſelves; but for one to hide himſelfe in the open light is not uſuall: darkneſſe (one would thinke) were more proper then that; *But how* Mercury *hath a more lively vigorous light then any of the other, I underſtand not*: I ſhould rather thinke that there were a more lively vigorous light in the Sun, Moone, and *Venus*. And whereas you ſay that *Venus* in her conjunction with the Sunne doth not appeare horned, is true; but if her husband *Vulcan* had beene as neere the Sunne, his hornes doubtleſſe had beene ſeene; doe not you know how much aſhamed *Venus* was, when the Sunne looked upon her, being in bed with *Mars*? Now, that the orbe of *Mars* containeth our earth within it, I will not deny; but I am ſure our earth containeth *Mars* within it, who is oftentimes too exorbitant: —— *Toto ſævit Mars impius orbe.*

And that the orbe of the Moone comprehends the earth in it, becauſe ſhee is ſome times in oppoſition to the Sunne, is a feeble reaſon; as, though the oppoſition of two round bodies ſhould be the cauſe why that which is in the midſt betwixt them, ſhould be within the circumference of either of their circles or orbes. Other Planets have their oppoſitions, is therefore the earth within the orbe of either of them? Or why is the earth more within the orb of the Moone then of the Sun, ſeeing the Moone is no more in oppoſition to the Sun, then the Sun is to the Moone?

3. You conclude your Booke with a large digreſſion upon the commendations of Aſtronomy, which hath for its object the whole world you ſay, *And therefore farre exceeds the barren ſpeculation of* univerſale, *and* materia prima. *Anſw.* It ſeemes you have left nothing for the objects of other ſciences, if Aſtronomy muſt ingroſſe the whole world for its object. 2. *Univerſum*, belike, exceeds *Univerſale* with you, and the extent of the one is not ſo large, nor the ſpeculation ſo fruitfull, as of the other; but ſurely your *Univerſum* or world in the Moone is as barren a notion, as that of *Univerſale*. 3. *The knowledge of Philoſophy and Logicke, is but cobweb learning in your conceit*; but we thinke that theſe cobwebs are ſtrong enough to catch ſuch flyes as you; and indeed there is more ſubſtance in theſe cobwebs then in your Aſtronomicall dreames and phanſies. 4. What you ſay of other knowledge,

That

That it depends upon conjectures and uncertainty; is moſt true of your Aſtronomicall Booke, wherein I have found nothing but ſuppoſitions, may-bee's, conjectures, and uncertainties. 5. Whereas you ſay, *That man had* os ſublime, *a face to looke upward, that he might be an Aſtronomer*: You are deceived, it was that hee might be a Divine; for the ſtarres were made, not that he ſhould doate upon them in idle ſpeculations and niceties full of uncertainty, but that by their light and motion he might be brought to the knowledge of Divinity, which your ſelf in your ſubſequent diſcourſe is forced to acknowledge. But take heed you play not the Anatomiſt upon theſe celeſtiall bodies, (whoſe inward parts are hid from you) in the curious and needleſſe ſearch of them; you may well loſe your ſelfe, but this way you ſhall never finde God. 6. Whereas you ſay, *That Aſtronomy ſerves to confirme the truth of the holy Scripture*: you are very prepoſterous, for you will have the truth of Scripture confirmed by Aſtronomie, but you will not have the truth of Aſtronomie confirmed by Scripture: ſure one would thinke that Aſtronomicall truths had more need of the Scripture confirmation, then the Scripture of them. And indeed, all Learning beſide the Scripture, is but ἔρις πολλὴ καὶ λογομαχία τις ἄσπιδος, as *Theodoret* ſaith; that is, meere contention and ſtrife of words not to be reconciled. Let us not then ſpend that time in vaine and needleſſe ſpeculations, which we ſhould imploy in knowing God, and in working out our ſalvation with feare and trembling; *For it is life eternall to know God in Chriſt*: in reſpect of which excellent knowledge, the Apoſtle *accounted all things but droſſe and loſſe*. *Moſes* was a great Aſtronomer, yet he reckoned the knowledge of this, and of all the Egyptian wiſdome, but *detrimentum & ſtultitiam*, but loſſe and fooliſhneſſe in reſpect of the knowledge of holy Scripture, ſaith Saint *Ambroſe*. Aſtronomers with *Martha, are buſie about many things*, but the Divine with *Mary, hath choſen the better part which ſhall never be taken from him*. How ſmall was the ſtore of gold and ſilver which the Hebrewes brought out of Egypt, in compariſon of that wealth which under *Solomon* they had in Jeruſalem? ſo ſmall and meane is all humane knowledge compared to the Scripture: for whatſoever learning is nought it is condemned here, whatſoever is profitable it is to be found here; and more abundantly in the wonderfull height and depth of Scripture, then any where elſe, ſaith Saint *Auſtin*.

Serm. 1. De Fide.

L. 1. De Officiis.

De Doctrina Chriſtian. L. 2. c. 41.

Let it then be our delight, *Nocturna versare manu, versare diurna*: still to be meditating in this holy Law of God; that like trees planted by the river side, wee may fructifie in due season. And as *Alexander* did carry about him *Homers Iliads* in the rich cabinet of *Darius*, even so let the holy Scripture be still our *Vade mecum*, and in the cabinet of our heart let us lay it up, as *Mary* did the words that were spoken of Christ. I may say of Scripture as the Apostle said of Christ, *Whither shall we goe from thee? thou hast the words of eternall life.* Thus briefly and by snatches (being with-drawne and distracted with many other businesses) have I answered your Booke, which I undertooke partly out of the confidence I have of the truth of our side; partly to vindicate my owne credit; partly to satisfie my friends; and lastly, to excite others whose abilities exceed mine to maintaine and defend the truth of our opinion, and to explode the contrary as false, which in time may prove dangerous and pernicious to Divinitie.

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FINIS.